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THE OPIUM MANUAL.

PART III.

FACTORY PROCEDURE.

For the guidance of the Officers of the Ghazipur Opium Factory.

PUBLISHED UNDER THE AUTHORITY OF THE BOARD OF REVENUE, L.P.

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PREFACE.

OPIUM.

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IT having been decided to issue a revised edition of the Opium Manual in four separate parts, the present Volume (Part III), which is intended for the use of officers in the Benares Agency only, contains the rules and forms relating to Factory Procedure.

2. This volume is interleaved with blank pages to allow of the insertion of additions and alterations hereafter, if necessary. Errors and omissions should be brought to the notice of the Board.

3. This volume may be cited briefly as—"The Opium Manual, 1891 (Benares), Part III."

BOARD OF REVENUE, L. P.,
The 24th October 1891.

T. INGLIS,
Offg. Secretary.

THE OPIUM MANUAL.

PART III.

(GHAZIPUR FACTORY.)

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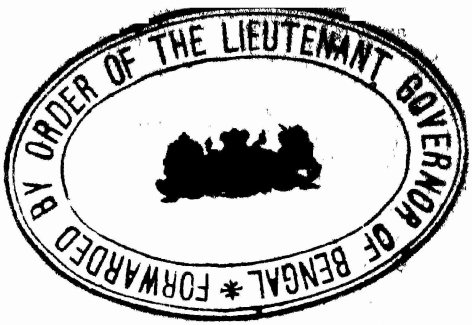

CHAPTER I.

OFFICERS AND THEIR DUTIES.

1. The Opium Agent is responsible for the efficient working of the Factory in all its branches.

2. The Factory Superintendent is the officer in charge of the Factory, and responsible to the Agent for everything connected with such charge. The Factory Superintendent is also *ex-officio* Opium Examiner for purposes of Act XIII of 1857.

3. The Assistant Factory Superintendent and the other officers of the Factory are under the orders of the Factory Superintendent, and are responsible to him for the performance, in a zealous and intelligent manner, of the duties assigned to them.

4. The rules regarding the appointment and dismissal of subordinates, as laid down in Part II, Chapter II, Section (v), Rules 54, 57, 60, 61 and 64 of the Opium Manual, apply equally to subordinates at the Factory, and the Factory Superintendent will exercise the same powers in this respect as a Sub-Deputy Opium Agent in his division.

5. The Factory Superintendent is authorized to incur all necessary and ordinary contingent expenditure in connection with the manufacture and provision of opium.

Charges of an unusual or extraordinary nature will only be incurred with the previous sanction of the Agent. Cooly and other necessary establishments on daily wages will be employed by the Factory Superintendent without the sanction of the Agent, but all other extra establishment required at the Factory will only be entertained with the sanction of the Agent previously obtained.

6. The duties connected with the Factory are comprised under the following heads:—

(*i*) Receipt and expenditure of leaves.
(*ii*) Receipt and expenditure of trash.
(*iii*) Import, examination, standard computation and storage of opium.
(*iv*) Manufacture and care of provision opium.
(*v*) Packing and despatching of provision opium.
(*vi*) Manufacture and supply of excise opium.
(*vii*) Disposal of contraband opium, and manufacture and supply of alkaloids
(*viii*) General stores and cups.
(*ix*) Miscellaneous departments and duties.
(*x*) Accounts and audit.

the Assistant in charge of the Leaf Department, who will note in his daily import register (Factory Form No. 1) the name of the subdivision from which they have come, the number of the challan, the total number of baskets or cylinders, the condition of the challan, whether wet, dry, in good order or damaged, and the efficiency of the packing.

10. When a leaf challan arrives by boat or carts, the Assistant in charge of the Leaf Department will grant a receipt (Factory Form No. 2) to the contractors after he has counted the number of baskets or cylinders, satisfied himself as to their outward condition, and made his entries in his import register. Zilladars or burkundazes arriving in charge of leaf challans will also be furnished with a similar receipt, after their challans are weighed, with the date of their release noted on them, when they will be at liberty to return to their subdivisions.

11. The leaf challans will be weighed off as soon after their arrival at the factory as possible, and in the order of their arrival as shown in the import register of the Assistant in charge. The Assistant in charge of the Leaf Department will be held responsible for allotting the challans for weighment to the weighing Assistants in their proper order.

12. Each morning, before work begins, the scales and weights to be used will be tested by the Head Factory Weighman in the presence of the weighing Assistants. The challans will then be weighed, each basket or cylinder singly. The exact Factory gross weight of leaves and basket (or cylinder) will in every instance be entered in column 6 of the challan register, and the increase or decrease on the district weighment in column 7 or 8. The rest of the columns and the totals will be filled up in the Audit Office, under the supervision of the Head Auditor.

13. After each basket is placed on the scale and the weight called out, the parkhia will open out the leaves and search them for foreign substances; he will satisfy himself that the leaves are sound, and are not damp, mildewed or grub-eaten, and that no leaves of a previous year's manufacture have been included.

The weighing Assistant, who will have been furnished with specimen leaves for his guidance, will then, with the help of the parkhia, satisfy himself that the quality agrees generally with the district officer's classification, and will pass the basket.

During the progress of the weighments the weighing Assistant will check-weigh at random at least 10 per cent. of empty cylinders or baskets of each challan, and will enter the result with his initials in the remark column of the challan register. Preference in selection should be given to such baskets or cylinders as may show a large increase or decrease.

14. Should any considerable portion of the leaves in a basket be found to be of a different class to that assigned by the district officer, or should the discrepancy between the Factory and the district weighment and classification be of so glaring or unusual a nature as to indicate fraud or gross carelessness, a note of such discrepancy will be made against the basket in the remark column of the challan register, and the basket will be set aside to be inspected by the Factory Superintendent. If that officer considers the matter of sufficient importance, he will report

it to the Agent, who will either decide the case on its merits or communicate with the district officer concerned. In all such cases the baskets should be held in deposit pending the final disposal of the reference.

15. It is not competent for the Factory Superintendent or any of his subordinates to alter the district officer's classification of leaves except after reporting each case to the Agent and taking his orders. Where differences in classification occur, but are not of such a glaring nature as to necessitate a reference, a note should be made to that effect by the Factory Superintendent in the remark column of the English challan register, the note being copied into the vernacular copy by the Audit Office for the information of the district officer.

16. At the end of the day's weighments the Assistant in charge of the Leaf Department will take charge of the challan registers from the weighing officers, and will forward to the Audit Department such of them as have no objections pending against them, taking the acknowledgment of the Head Auditor for these registers in a receipt-book kept for the purpose (Factory Form No. 3).

17. The Head Auditor will, on receipt of the challan registers, enter them in his "Daily Register of Leaf Challans" (Factory Form No. 4). He will then distribute the English and vernacular copies to the clerks and mohurirs respectively for the necessary check, addition of totals, filling in the net Factory weight of leaves, and calculations of value, which should be made on the district weighment and classification unless the increase or decrease in weight is above 5 per cent., or unless by the orders of the Agent the district officer's classification has been altered. The clerk and the mohurir checking the English and vernacular copies of the same register will compare the figures of the two copies with each other. All discrepancies, and every increase or decrease above 5 per cent., will be entered in an objection statement (Factory Form No. 5), which will be submitted at the close of the day's work for the orders of the Factory Superintendent before the value is calculated.

18. Unless special circumstances exist, the Factory Superintendent will direct all such increases to be passed in full, and the decreases, where they exceed 10 per cent., to be disallowed altogether, and the baskets or cylinders to be passed at their net Factory weight. If the number of baskets or cylinders showing a decrease* between 5 and 10 per cent. does not exceed 5 per cent. of the total number in the challan, the Factory Superintendent may, if he thinks fit, direct them to be passed at district weight. In all cases of increase over 5 per cent. and decrease over 10 per cent., and where the decrease between 5 and 10 per cent. affects more than 5 per cent. of the baskets or cylinders of a challan, the district officer's explanation will be called for, before the value is calculated.

19. As each pair of English and vernacular challan registers is disposed of, the clerk and the mohurir will each sign both the copies of the register in token of their having checked and compared them together. They will then make over the registers to the Head Clerk of

* In dealing with decreases the Factory Superintendent's attention should be directed to the distance travelled and the time occupied by a challan in transit. Subdivisions lying close to head-quarters should not be dealt with as leniently as those situated at a distance.

the Audit Office, who will enter the details of the calculations and totals in the "Detailed Kothiwar Register of Leaves" (Factory Form No. 6), and will compare the gross totals with the figures entered in the "Daily Register of Leaf Challans."

20. The Head Auditor will then examine personally the English and vernacular copies, and will check 5 per cent. at least of the calculations in the body of the registers, and all the gross valuation calculations. If he is satisfied as to the accuracy of the check and of the calculations, he will sign the registers himself and submit them for the signature of the Factory Superintendent.

21. These registers will finally be countersigned by the Opium Agent, and the vernacular copy will be sent from the Agent's office by registered post to the district officers concerned, to enable them to prepare their final adjustment accounts of cultivators. The English copies will be retained in the Agent's office, to be audited under the superintendence of the Head Accountant.

22. At the close of each day's work the Head Auditor will submit to the Factory Superintendent a memorandum (Factory Form No. 7), showing the net Factory weight of leaves passed by the Audit Office as received. The Factory Superintendent after inspection and signature will forward this to the Assistant in charge of the Leaf Department, who will enter on the receipt side of his stock book of leaves (Factory Form No. 8) the quantity shown on this memorandum. The memorandum will then be returned, with the signature of the Assistant in charge of the Leaf Department, for record in the office of the Factory Superintendent.

SECTION II.

Sorting and Storage.

23. In addition to the district classification of leaves, which is roughly verified by the weighing assistant and parkhia, a further and more careful examination and classification of leaves will be made for Factory purposes on the day following that on which the leaves have been weighed. The baskets or cylinders, immediately after weighment, will be removed to the sorting room set apart for this purpose, and will be stacked in stacks of three maunds for each sorter.

24. The Assistant Factory Superintendent will arrange for the employment of sorters at the rate of one man to every three maunds of leaves, and these sorters will be specially selected from the roll of cake-makers.

25. In sorting the leaves great care will be taken that all mildewed, grub-eaten and damp leaves are set aside, also leaves that have been doubled over in packing. Leaves badly mildewed, grub-eaten or fermented from damp will be altogether rejected as useless, but partially mildewed or grub-eaten leaves will have the affected portions torn off and rejected, the sound portions being exposed to the sun, if necessary, and stored. Leaves that are damp, but not fermented, will be exposed in a shady place until quite dry and fit for sorting. Leaves that are doubled over will be stored away separately until the east winds and rains set in, when they will regain their shape and can be brought into use.

26. The sound leaves will be divided by the sorters into four classes :—

(*a*) Chandi, leaves of a light colour, of a smooth surface, of thin substance, and of an even texture, measuring from 7 to 10 inches in diameter.

(*b*) Sattai, leaves of a light colour, but of a less even texture than class (*a*) and somewhat smaller in size ; also pieces of chandi leaves.

(*c*) Dawan, leaves somewhat thicker, of slightly less even texture, and of a colour a trifle darker than those of class (*a*), but of about the same size.

(*d*) Gata, strong thick leaves somewhat rough on the surface, and of a colour considerably darker than that of classes (*a*) and (*c*), and measuring from 5 to 10 inches in diameter.

27. As the leaves are sorted they will be carried to the leaf godowns, where they will be arranged, class by class, on narkat mats spread upon the racks. The classes will be apportioned to different parts of the leaf godowns, and the name of each class will be prominently shown on a board hung up against the racks.

28. After the leaves have been stored they will (except during the prevalence of the hot westerly winds, when the leaves are very brittle and should be handled as little as possible) be periodically turned on the racks by boys engaged for the purpose. All grub-eaten and mildewed leaves will be separated. From those partially injured the affected portion will be torn off and rejected, and the sound portions stored for petty repairs, while those which are badly injured will be altogether rejected.

29. At the end of each day's sorting all the broken and useless pieces of leaves (choor) that have accumulated during the day will be collected under the orders of the Assistant in charge of the Leaf Department in a place set apart for the purpose, and will be weighed in his presence and heaped up for subsequent sale by auction. The result of weighment will be shown in a register (Factory Form No. 9), which will be submitted every morning for the inspection of the Factory Superintendent, who will see that the daily wastage is regularly recorded, and will control it if he considers that the percentage is unnecessarily high.

30. After caking is over, and as soon as there is a convenient break in the rains, the whole of the surplus leaves will be brought down, class by class, from their racks, and will be carefully picked, leaf by leaf, by hand. If the storage accommodation is good, it will probably be unnecessary in ordinary years to repeat this operation more than once after the packing is over. Should, however, grubs be plentiful, or should the storage accommodation be inferior, the leaves must be thoroughly overhauled and picked more frequently. In this matter the Factory Superintendent must be guided by the circumstances of the season and the general condition of the leaves.

31. At a convenient time, either after sattai* or after packing and before the new season's leaf begins to come in, stock will be taken by an Assistant specially deputed for the purpose and unconnected with the Leaf Department of the entire quantity of leaves on hand, each

* Stock should be taken after the rains are well over, otherwise the absorption of moisture by the leaves during damp weather will give fallacious results.

class being weighed separately; and the result of stock-taking, which will be recorded in a register (Factory Form No. 10), will be duly reported to the Agent. If the Agent is satisfied as to the stock-taking and the explanations given for any increase or deficiency, he will direct the adjustment of the stock book of leaves, and the Factory Superintendent will cause the adjustment to be made by issuing authority to the Assistant in charge in the Factory order-book.

SECTION III.

Issue and expenditure.

32. Leaves will be issued from the Leaf Department on indent only (Factory Form No. 11), which should be drawn up by the Assistant in charge of the department for which it is required, and countersigned by the Factory Superintendent.

These countersigned indents will be retained and filed by the Assistant in charge of the Leaf Department as vouchers in support of his issues, and as a check on his stock book.

33. Leaves will be indented for and issued on account of (*a*) the manufacture of cakes; (*b*) sattai, kassai and general repairs of cakes; (*c*) petty repairs of cakes.

34. At the commencement of the caking season the Factory Superintendent will determine and publish in Factory orders (after considering the probable outturn of the season's provision opium) the proportion of old and new leaves to be used in making up the bundles (bhagas). It may be found necessary to re-adjust this proportion of old to new leaves during manufacture in the event of there being any marked difference between the estimated and the actual deliveries of opium. The proportion should be so fixed and regulated as, if possible, just to exhaust the old stock by the end of manufacture. The proportions of "dawan" and "gata" (or second and third classes) will also be laid down. These will depend on the quantity of each class in store, and in fixing their proportions the old leaf in store should be accounted as "gata" (or third class), and, as far as may be possible, the proportions of dawan and gata (or second and third class) should be about equal.

35. The quantity of dry leaf allowed for the construction of the shell of each cake at first manufacture is 5 chittacks. As, however, the weight of the leaves is influenced from day to day during the rains and the prevalence of easterly winds, by the amount of moisture in the atmosphere, it will be necessary to ascertain each day the extra rate of leaf, if any, to be added on this account.

36. For this purpose not less than six seers of leaves, half being leaves of the current season, and half being old leaves of the preceding season, will be sent every day at noon, while manufacture continues, by the Assistant in charge of the Leaf Department, to the laboratory. The Assistant Opium Examiner will then cause 2½ seers of each kind of leaf (viz. old and new) to be accurately weighed out, and to be placed separately on steam tables to be dried. After drying for at least three hours, they will be reweighed in the Assistant Examiner's presence and the results will be recorded by him in the leaf assay form (Factory Form No. 12).

37. The total of compensation to be made for each 2½ seers will be the loss in weight between the first and second of the above two weighments, minus an allowance of 5 per cent. (=2 chittacks in 2½ seers), on account of the normal moisture of the leaves. The compensation to be allowed to each bhaga will be calculated in grains in respect of (*a*) old leaves and (*b*) new leaves, and the entire compensation on account of both descriptions of leaf will be added to each bhaga in new leaf only.

38. The Assistant Opium Examiner will then obtain the initials of the Factory Superintendent and the Assistant Factory Superintendent to the results of assay, and will forward to the Assistant in charge of the Leaf Department the duplicate of the leaf assay form showing the compensation and the total quantity of leaf to be used in each bhaga the next day, and this will be filed in the Leaf Department as the authority for the expenditure of additional leaf used in making up the bhagas. In weighing the leaf bhagas the amount of compensation to be given will be represented by the addition to the weight of small metal tickets stamped with the number of grains represented by each. The Assistant in charge will obtain by indent a sufficient supply of these grain pieces from the Store Department before the commencement of manufacture.

39. On receipt of the leaf assay result from the laboratory and the indent from the Assistant Factory Superintendent the Assistant in charge of the Leaf Department will prepare the next day the requisite number of "bhagas" for the caking of the day following. To each scale will be told off a man to weigh the leaves, and a boy to tie up the bhagas. The weights provided at each scale will be two—one equal to the weight of the old leaves or the gata class, and the other of 5 or 5¼ chittacks, as the case may be, and the metal compensation ticket prescribed by Rule 38 will be conspicuously hung on the end of the scale beam holding the weights. Each scale will bear a distinguishing number, and the corresponding number will be shown in a portion of the godown, which will be set aside to hold the weighed bhagas of this scale after they are tied. For every six scales one additional scale will be worked as a test scale, the bhagas of each scale being weighed off in groups of five at a time at the proper test scale before being deposited in the portions of the godown railed off to receive them.

40. It will be the duty of the Assistant in charge of the Leaf Department each day to check-weigh, open out and examine not less than ½ per cent. of the bhagas at each scale, and to see that the leaves of each class and kind (old and new) have been properly assorted. In this work he will be assisted by two sirdars, and, if necessary, by a temporary Assistant. The Factory Superintendent will also inspect the work daily, and will satisfy himself, by examining and check-weighing bhagas, that the work is being properly carried on.

41. On the afternoon* of the day before the bhagas are required for caking, the Assistant Factory Superintendent will depute special

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* When a Sunday or a holiday intervenes, the Assistant Factory Superintendent will arrange that the wetting is done on the afternoon before the leaves are required for caking, and not on the afternoon of the last working day.

sirdars to count* over the number of bhagas indented for, and to have them conveyed to the wetting place, where, under the supervision of an Assistant from the caking department specially told off by the Assistant Factory Superintendent, they will be damped in the manner directed in the following rule.

42. The bhagas will be taken up from the barrows at the leaf-wetting vat, five or six at a time, by a cooly, who will hold them between the palm of his hand, edges vertical, and dip them into the water; the immersion should last about two or three seconds and be complete. After immersion the bhagas will be returned to the barrow, and be at once taken to the leaf-dripping shed, where they will be stacked on end on a grating of wood-work, side by side (like books on a shelf), in a single tier, and will so remain until required for use next day. Next morning, should the upper portion of the leaves be found to have dried too much, the bhagas will be sprinkled with a watering-can with a fine rose.

43. For sattai 2·25 kuchas of chandi and sattai leaves will be allowed for each cake, plus in each case the necessary allowance as compensation on account of atmospheric moisture, which will be determined in accordance with the instructions laid down in Rules 36, 37 and 38.

44. The chandi leaves required for sattai will be picked by selected cake-makers in the period intervening between the close of manufacture and the beginning of sattai, and tied up in bundles, each containing 110 leaves, which will be the number required for the sattai of 100 cakes, the allotted task of one cake-maker. On the day previous to the leaves being required, the Assistant Factory Superintendent will submit his indent through the Factory Superintendent as laid down in Rules 32 and 39, and the Assistant in charge of the Leaf Department will, on receipt of the indent and assay report for compensation, weigh out to the sirdar deputed by the Assistant Factory Superintendent the total quantity required consisting of chandi and sattai leaves. The number of bundles of chandi leaves to be issued will be arrived at by dividing the number of cakes to be sattaied by 100, and the balance of leaves required to make up the full weight, including compensation, will be made up of sattai leaves.

45. As soon as each day's sattai work is over, the cake-makers engaged in it will be employed under the supervision of an Assistant from the caking department deputed by the Assistant Factory Superintendent to damp the parcels of chandi leaves for the next day's use. This they will do by opening out each parcel and hand-sprinkling each leaf with water. When the weather is very wet the leaves will not be damped until the morning of the day on which they are required for use. The sattai leaves will be damped at the same time.

46. For general repairs and kassai, at the time of sattai, as much leaf of each class will be issued (as shown on the indent) as may be required, an account being kept of the quantity used for each purpose daily.

47. All repairs to cakes other than those at the time of sattai are known as "petty repairs," and for this purpose Assistants in charge of

* Hand-barrows of bamboo frame work, each holding 100 bhagas standing on edge, will be used for conveying them to the wetting vats.

cake godowns will indent, through the Assistant Factory Superintendent and Factory Superintendent, for the necessary quantity of leaves whenever such repairs are required.

48. In addition to his stock book of leaves the Assistant in charge of the Leaf Department will keep up accurate records (Factory Form No. 13 and No. 14) of leaves expended during manufacture and sattai. The number of bhagas left over will be intimated to him by the Assistant Factory Superintendent, and the choor returned from the caking department will be weighed back by him, and an accurate account will be struck of the quantities expended under each head as shown by the different columns. These forms, Nos. 13 and 14, as well as the leaf indents and leaf assay form, will serve as authorities from which the stock book of the department will be written up at the close of the day's work.

CHAPTER III.

TRASH.

SECTION I.

Mode of receiving trash.

49. Consignments of trash,* whether forwarded by district officers or delivered by contractors, must reach the Factory as soon after the 1st of April as possible, so that the entire indent for the year may be weighed and stored by the 1st June, before the rains set in.

50. Each challan of trash from the district will be accompanied to the Factory by a zilladar or burkundaz, in the same manner as a challan of poppy flower leaves. The contractor supplying the trash, or his authorized agent, may also accompany the challan if he desires to do so ; but if he fails to attend, the trash will be appraised and disposed of in his absence, and no complaints made by him afterwards will be attended to. Contractors delivering trash at the Factory must themselves be present, or they should depute their authorized agents, otherwise their trash will not be weighed in.

51. When trash is forwarded by a district officer, a challan form both in English and vernacular (Opium Form No. 104) will be sent by post to the Factory Superintendent simultaneously with the despatch of the challan (*vide* Part II, Chapter VII, Rule 320). When trash is obtained from contractors, the Sub-Deputy Opium Agent, as soon as the contracts have been concluded, will furnish the Factory Superintendent with a list (Factory Form No. 15) giving the names of the contractors, the number borne by each contract, and the quantity of trash contracted for by each person, and a copy of this list will be supplied by the Factory Superintendent to the Assistant in charge of the trash department for the use of the weighment officers.

52. The zilladar, contractor or other person in charge of a consignment of trash will give immediate notice of its arrival to the Assistant in charge of the trash department. It will be the duty of this officer, in the case of trash received from departmental officers, to cause the bags to be at once placed under shelter pending weighment. When trash is delivered by contractors, the person in charge of the trash will produce the contract and his metal ticket in proof of his identity. The Assistant will compare the document with the list of contracts furnished by the Sub-Deputy Agent, and should everything appear to be in order, he will permit the bags† to be brought into the factory and will cause them to be placed under shelter on the spot indicated by him.

* Instructions for indenting on district officers for trash are precisely the same as those laid down in Part II, Rules 297 and 298, for leaves.

† Trash bags will be supplied to the contractors by the district officer granting the contract. They should be issued in sets of 50 or 100, so that the deliveries of each contractor might be easily identified. A supply of 2,000 or 3,000 bags will ordinarily be sufficient for this purpose, provided that weighment of the trash proceeds from day to day with proper rapidity.

53. All trash received from departmental officers or from contractors will be weighed and appraised, under the same system as laid down in these rules, by one or more special Assistants (permanent or temporary) to be called Trash Weighment Officers, who will be appointed by the Factory Superintendent before the delivery of trash begins at the Factory.

54. Each consignment of trash will be weighed as soon as possible after its arrival at the Factory. The weighment will be conducted in the presence of the person (zilladar, contractor, &c.) in charge, by the Trash Weighment Officer, who will be provided with the following establishment:—

one mohurir,
one weighman,
two sirdars,
as many coolies as may be necessary.

55. The trash will be weighed bag by bag. As a counterpoise, an empty bag of the same size and make as the bags containing the consignment will be placed upon the weight pan of the scale. As each bag is weighed, the weighment officer will satisfy himself that the beam is properly adjusted, and that the weight called by the weighman is correct. He will then write in the proper column of the trash weighment register (Factory Form No. 16), or of the trash challan register, the number borne by the bag, which will be called out by a boy specially told off for the purpose, and against it will enter the weight called out by the weighman. The mohurir will simultaneously enter the number and weight of the bag in the vernacular copy of the same register.

56. As the weighment proceeds, the weighment officer will take out at random from each consignment not less than 5* per cent. of the bags. These will be emptied out, bag by bag, and any foreign† matter will be separated from the trash by women with "soops," or other efficient means in the presence of the weighment officer, and under the supervision of one of his sirdars. The foreign matter found in the selected bags of each consignment will be separately weighed by the weighment officer, who will enter both the weight of the foreign matter and the serial number and weight of the sample bag of trash in which it was found, in memorandum A at the foot of the weighment or challan register.

57. The foreign matter taken from the selected bags of each consignment will be tied up in a small bag bearing a distinguishing number, which the weighment officer will also enter in the memorandum.

Inside this bag he will place a ticket (Factory Form No. 17) giving the weight of the foreign matter, the number and weight of the

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If more than one consignment has a broken multiple of twenty, and work is likely to be delayed, the 5 per cent. may be made up by calculating on the combined consignments so long as one or more bags are taken from each consignment.

† Foreign matter includes broken poppy-heads and stalks as well as earth, stones, potsherds, &c.

bags from which it was taken, and the number and date of the consignment to which they belong. These small bags will be made over to the Assistant in charge of the trash department, by whom they will be carefully kept under lock and key until such time as the payments for trash have been made, and intimation given to the Factory Superintendent. The Factory Superintendent will then direct the destruction or sale by auction of the contents of these bags.

As soon as the weighment of each consignment is over, the weighment officer will give to the person in charge of the trash a receipt (Factory Form No. 18) for the number of bags delivered by him.

58. As each bag leaves the scale, its contents will be emptied outside the godown allotted for its reception, and carefully examined by the weighment officer's second sirdar. If found to be in sound condition, the trash will be conveyed into the godown in baskets and there stored on a bedding (not less than 18 inches thick) of the refuse siftings obtained from the trash cleaned for the previous season's packing, covered with narkat or bamboo matting. If any portion of it is found to be unfit for use, it will at once be separated and brought to the notice of the weighment officer, who will weigh it and enter the weight in memorandum B at foot of the weighment register. The rejection will then be set aside for the inspection of the Factory Superintendent, who will note his orders for its disposal against the memorandum in the weighment register.

59. At the close of the day's work the weighment officer will sign both the English and the vernacular weighment and challan registers, and will make them over to the Assistant in charge of the trash department, who will forward them to the Audit Office, taking an acknowledgment for them.

60. In the case of trash received from a district officer, the Audit Department will fill in columns 7 and 8 of the challan register, adding up the total number of bags and calculating the proportionate deduction to be made for foreign matter. The challan registers will then be submitted for the signature of the Factory Superintendent, and after they are countersigned by the Agent the vernacular copy will be despatched from Agent's office to the district officer concerned, and the English copy will be filed in Agent's office for subsequent audit.

61. In the case of trash supplied by contractors, the weight of the bags of each consignment will be added up, the proportionate deduction to be made on account of foreign matter from the total weight of each consignment will be calculated, the net weight of serviceable trash to be paid for will be ascertained, and all these details will be shown in a daily weighment abstract (Factory Form No. 19). Each day's weighment registers and daily abstracts will then be submitted for the inspection and signature of the Factory Superintendent.

62. The Audit Office will also keep up for each subdivision a ledger (Factory Form No. 20) for trash supplied by contractors, a separate page being assigned to each contractor. This ledger will be written up daily from the weighment abstracts. A memorandum (Factory Form No. 21), compiled from theledger, showing the amount of trash delivered by each contractor up to date and the amount yet deliverable by him, will be furnished to the weighment officer, who will

refer to it to ascertain when each man's contract is about to be completed.

This memorandum will be sent by the Audit Office every morning through the officer in charge of the trash department, and will be received back from him for the necessary postings when trash weighments for the day are completed.

63. The weighment officer should inform each contractor when his contract is about to be completed, and should not receive, in the last instalment, more than would give, by a rough calculation for foreign matter, the amount still remaining to complete the contract.* When a contractor, after supplying a certain quantity of trash, declares that he is unable to give more to complete his contract, the weighment officer will make a note to that effect against the man's name in the abstract of the ledger.

64. On the close of each week the Head Auditor will prepare and submit to the Factory Superintendent a list (Factory Form No. 22) in English and vernacular of those contractors who have completed their contracts during the week or have expressed their inability to supply any more trash. These lists will be signed by the Factory Superintendent and submitted to the Agent for countersignature and transmission of the vernacular copy to the district officer, the English copy being retained for subsequent audit with the weighment registers. The district officer will on receipt of the list proceed to prepare his trash patsaltamam for making payments to the contractors, and he will inform the Factory Superintendent of the completion of the payments of each list so as to allow of the sample bags of refuse trash being disposed of.

65. The Head Auditor will submit to the Factory Superintendent daily during the receipt of trash a memorandum (Factory Form No. 23) showing the gross amount of trash passed by the Audit Office each day as received into the Factory. The Factory Superintendent will countersign and forward the memorandum to the Assistant in charge of the trash department, who will credit in the account of uncleaned trash in his stock book of trash (Factory Form No. 24) the quantity shown in the memorandum, and return the memorandum with his initials for record in the Factory Superintendent's office.

SECTION II.

Cleaning and expenditure of trash.

66. When the rains are well over and the weather perfectly dry (generally between the 25th October and 1st November), the cleaning of the trash will begin under the effective supervision of the Assistant

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* Should a contractor deliver trash in excess of his contract quantity, the amount so delivered, if within 5 per cent. of the quantity contracted for, will be accepted and paid for in the ordinary way. If the quantity exceeds 5 per cent., the contractor must make his own arrangements for getting rid of the whole of the excess to some other contractor under whose account delivery of it can be taken.

in charge of the trash department, and will be continued on dry* days only until the entire trash of the season is cleaned. After a fall of rain trash cleaning will not be resumed for at least three clear days (or 72 hours), to admit of all surroundings being perfectly dry.

67. The trash will first be passed through sieves of ¼ inch meshes, and will thus be cleared of foreign matter. Poppy leaves which are too large to pass through the meshes will be broken up into trash, and again put through the sieves, or will be sifted in "soops" by women. When uncleaned trash is carried from the godown to the sieves, care will be exercised that no damp, mildewed, musty or caked trash is included.

68. At the end of the day's work the quantity of sifted trash and refuse from each sieve will be heaped up separately and conveniently in close proximity, to enable the Assistant in charge and his sirdars to check the tale of work done by each set of four women (which should be about 20 maunds daily of clean trash). The Assistant with the help of his sirdars will check the work by the height and circumference of the heaps, and will enter in the proper column of his trash cleaning day-book (Factory Form No 25) the number of sieves that have worked. The partially cleaned trash will then be carried by the women and heaped up under cover for the night close to the winnowing machines, and the refuse will be thrown away in the place allotted for it.

69. The next day the whole of the above trash will be again cleaned by means of winnowing machines and freed of any remaining dust and earthy matter, and the entire quantity will be measured in boxes of known capacity (the weight of a few boxes being checked by actual weighment,) and conveyed to the storing godowns, as fit for packing purposes. The Assistant in charge will then fully write up his trash cleaning day-book, and will credit in his stock book of trash the actual quantity of cleaned trash obtained from the winnowing machines, and will debit on the side of the stock book reserved for uncleaned trash a quantity that will be made up of the amount of cleaned trash obtained, plus $\frac{36}{64}$ths of this amount as representing the refuse† discarded. The Assistant's day-book will be brought before the Factory Superintendent for his initials daily during that officer's rounds of inspection.

70. For use in caking, sattai and petty repairs, a finer description of trash will be prepared, when required, by passing cleaned trash through sieves with $\frac{1}{8}$th inch meshes. The quantity remaining on the sieve will be returned to store. The siftings will be cleared from dust and earthy matter by being thrown upon a sieve of $\frac{1}{16}$th inch meshes. Whatever passes through this sieve will be rejected, and the trash remaining on the sieve will be issued for use.

71. Cleaned trash will be supplied from the trash department on indent only (Factory Form No. 26), which will be drawn up by the Assistant in charge of the department for which it is required, and countersigned by the Factory Superintendent. These indents will be filed

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* By 'dry' days is meant days on which the humidity does not exceed 74° (100° being saturation).

† It has been found by actual experiment that 100 maunds of uncleaned trash gives about 36 maunds of refuse and about 64 maunds of trash fit for packing.

by the Assistant in charge of the trash department as vouchers in support of the expenditure shown in his stock book of trash.

72. Each day during the rainy season, and at other seasons of the year whenever rain has fallen, the trash godowns will be carefully examined by the trash sirdar, assisted by special beldars, so that any leakage may be at once detected. Where the godowns are tile-roofed and are thus peculiarly liable to leakage, iron rods will, as an additional precaution, be thrust into the heart of the stacks through holes in the wall of the godown at a convenient height from the ground. These rods will be drawn (daily during the rains, and at other seasons, after rain has fallen), and will be handled throughout their entire length by the Assistant in charge of the trash department, so that any sign of heating may be at once detected. Should heating or leakage be discovered, the Assistant will immediately report the matter in writing to the Factory Superintendent, who will investigate the case and cause the damp trash to be removed. The Factory Superintendent will at the same time take steps to have the godown examined, and the necessary repairs at once effected through the proper channel.

73. As it is not possible to take annual stock of trash by actual weighment, owing to the large bulk of the prescribed reserve of at least half a season's requirements being always on hand, the Factory Superintendent will be guided in the matter by the known approximate holding capacity of the several godowns used for storing trash, and will make as accurate an estimate as possible of the quantity in hand, submitting a report of stock to the Agent before the 31st March in each year.

CHAPTER IV.

IMPORT OF OPIUM.

SECTION I.

Receipt of opium challans.

74. Some time before the first challan of opium of the season is expected to arrive at the Factory, the Factory Superintendent will appoint, from among the permanent staff of the Factory, an Assistant to be called the Import Officer. It will be the duty of this officer to receive all opium challans on their arrival at the Factory, and he will be assisted, if necessary, by a temporary assistant.

75. On receipt of the challan registers of opium, and all papers in connection therewith, the Head Clerk of the Factory Superintendent's office will forward them to the Import Officer, taking that officer's receipt for them in a receipt book kept for the purpose in the Factory Superintendent's office.

76. On the arrival of a challan at the Factory, the Import Officer (or his assistant) will examine carefully the packing, seals and covers of all sound jars, and satisfy himself that the jars have not been tampered with. The Import Officer will then enter in his register (Factory Form No. 27) the number of jars and pots* received; he will then cause the broken jars and pots, if any, to be separated from the unbroken jars and pots, and enter the former in a separate register (Factory Form No. 28), and will note in his daily report book for the orders of the Factory Superintendent any shortcomings he may observe, in the manner in which the jars have been packed for despatch; or any circumstances during the transit requiring attention. He will also write up his register (Factory Form No. 29), showing the material, quality and condition of the baskets and packing from each subdivision.

77. He will next cause the unbroken jars to be taken out of their baskets, and the straw bedding to be removed to the place allotted for it, so as to minimise risks of fire. He will then cause the unbroken jars to be replaced in their baskets, and the whole of the jars of the challan to be taken inside the Factory premises, and deposited in the jar godown, or in such other place as may be appointed by the Factory Superintendent for the reception of jars.

78. He will then note in the register of broken jars, as regards each of the broken jars or pots, whether its contents have been left in the original jar, or have been placed in another jar or pot, and he will examine the zilladar in charge as to the place and circumstances of the breakage, and will reduce the man's statement to writing, and

* Seals of basket containing pots should be broken in the presence of the zilladar in charge and the pots carefully counted before delivery is taken.

record it concisely in the last column of the register. This done, he will weigh the broken jars or pots, and record the results in their proper columns.

79. Should it be impracticable, from the nature of the breakage or the escape of opium, to weigh the jar or pot with its contents separately from the straw and basket, he will cause the whole to be weighed together and the average* weight of the basket with straw deducted from the gross weight, making a note of the fact in the last column of the register, and will enter the net result in his register as the result of the Factory weighment of the broken jar. This weighment is made with a view to ascertaining whether any opium has been abstracted or lost from the broken jar before its receipt at the Factory.

80. At the close of the day the Import Officer will submit to the Factory Superintendent the following documents duly filled up:—

(*i*) Memorandum of jars and pots received from each subdivision during the day (Factory Form No. 31).

(*ii*) Memorandum of broken jars received into the Factory (Factory Form No. 32).

After the Factory Superintendent's inspection and initials, the first memorandum will be filed in his office for compiling account No. 1 of the "Factory Stock Account," and the second memorandum will be forwarded to the Audit Office for compiling the daily weighment report (Factory Form No. 33) to the Agent.

81. At the close of the day the Import Officer will also submit for the Factory Superintendent's inspection and orders his report book. The Factory Superintendent will note any circumstances requiring immediate action, and will bring them to the notice of the Agent, with a view to the prevention of shortcomings, whether in packing or transit during the current season.

82. When the carriage of opium jars from the Tarighat station across the river to the Factory, and also the conveyance of jars from subdivisions in the neighbourhood, not on the line of rail, are done by contract, the Import Officer will give to the contractors, on the close of the day, a receipt (Factory Form No. 34) for the total number of jars and pots delivered from each subdivision during the day.

83. The Import Officer will be in charge of the challans of opium from the time of their receipt in the Sadr Factory until the opium passes into the malkhana and an acquittance is obtained from the officer in charge.

SECTION II.

Weighment.

84. The opium challans will be weighed off, jar by jar, by one or more extra assistants, temporarily attached to the Factory for the purpose, who will be called the weighing officers.

* The average weight of a basket with straw will be found by selecting at random 6 baskets with straw from the challan in which are the broken jars, weighing these, and striking an average. The weighment, whenever necessary, of these empty baskets with straw, with the average obtained for each challan, should be duly recorded in a register (Factory Form No. 30).

"81 (*a*). At the close of the day, the Import Officer will make over to the zilladar in charge of each chalan received and examined a discharge certificate (Factory Form No. 41) after having it countersigned by the Factory Superintendent. The zilladar will then be free to return to his district." 7-4-1901.

85. The Factory Superintendent will fix the date for the weighing of challans preparatory to parakh, and will publish his orders in the Factory order book. The Import Officer will then submit, through the proper channel, his indents for scales, weights and necessary apparatus, and for temporary establishments for each weighing officer, according to the scale laid down for the purpose, and will have all in readiness for the time fixed for the weighing operations to begin.

86. Each day, before beginning work, the weighing officer will examine his scale beam and scale pans, and satisfy himself that they are in perfect working order. He will then carefully test all the weights belonging to his scale, by comparing them, one by one, with the spare set of weights kept under lock and key by the Import Officer. Any shortcomings in either scales or weights should at once be brought to the notice of the Factory Superintendent, who will cause other scales or weights to be issued before weighment is begun.

87. The Import Officer will hand over to the weighing officers, before work begins every morning, the registers and abstracts of the challans each officer is to weigh. The challans will, as a rule, be taken for weighment in the order of their arrival at the Factory, but the Factory Superintendent may, at his discretion, order for weighment challans of later arrival should difficulty regarding accommodation, or the consistence requirements for caking, render it necessary. Also at the commencement of a season the first challans of all subdivisions will have the preference in weighment in the order of their arrival, so as to enable the Factory to give to each officer early intimation of the results of his classification. A challan containing jars wet by rain or other cause will on no account be brought to the scale until every jar in it is thoroughly dry again, and the Import Officer will invariably make a note against every jar so wetted, in the last column of the challan register, before making the challan over for weighment.

88. As each jar is brought to the scale, the weighing officer will notice the seal and cover; and if the fastenings appear to have been insecurely or improperly made, or to have been tampered with, he will immediately bring the matter to the notice of the Factory Superintendent. The coolies will carry each jar to the scale in its basket; it will then be removed from the basket, and placed upon a soft pad, where it will be dusted before being lifted into the scale; and the weighing officer will be careful to see that the jars are not roughly handled by the coolies at the scale.

89. The weighing officer will see that each jar is weighed with an even beam, that the weights are all on one side of the scales, and that the weighman's hands and feet are clear of the scale pans. The weighman will call out the weight, and will chalk it in Hindi figures on the jar, and the weighing officer will at the same time enter in column 6 of the challan register the weight of the jar, and in columns 7 and 8 any increase or decrease as compared with the district weighment as given in column 5. The mohurir will simultaneously make the corresponding entries in the vernacular copy of the register. The jar will then be carefully replaced in its basket, and will be laid out, with the other jars of the challan, in the place indicated by the Import Officer.

90. Any increase over the district weight, and any decrease in excess of one seer, will be noted by the weighing officer in the tabular statement on the first page of the challan register.* Before making this entry in the register he will carefully compare the district tare weight of the jar, as entered in column 3 of the challan register, with the corresponding figures in the tare register (Opium Form No. 62) and on the jar tickets.

If any discrepancy exists, he will note it on the tare register, and will write the word "compared" in the remarks column of the challan register.

91. During the Factory Superintendent's daily rounds of inspection the weighing officer will bring to his notice jars which have shown a marked discrepancy between the district and Factory weight. If the cause of the discrepancy cannot be ascertained from a comparison of the marks on the jar with the entries in the challan and tare registers, the opium will, in the Factory Superintendent's presence, be carefully removed and placed in tagars, and (*a*) the opium from each jar, and (*b*) each jar with its lid and cloth cover, will be separately weighed, in order to ascertain whether the error is in the jar weight, or in the opium weight, as recorded by the district officer. A note of the result will be made on the challan register for communication to the district officer, the necessary action being taken by the Audit Office.

The tagars into which the opium has been transferred will at the same time be ticketed with the number, class, &c., of the jar to which the opium belongs, and will be treated in the same manner as the rest of the challan.

92. The Factory Superintendent will also, during his rounds of inspection, test-weigh at least 1 per cent. of the jars weighed by each weighing officer to satisfy himself that the weighment is being conducted accurately, and he will initial each such test-weighment in the challan register.

93. During the progress of weighments the weighing officer will select at random 2 per. cent of the jars of each challan under weighment, and will have them marked distinctively, a style being used to prevent the marks being obliterated during the process of washing. The names of the subdivisions to which these jars belong, their numbers and tare weights will be entered in a register (Factory Form No. 35), and the Import Officer will see that these marked jars are returned again after they have been emptied of their contents in the malkhana, washed (without being broken) and dried. The weighing officer will then check-weigh them, entering the weights in the proper column of the empty jar register, and comparing them with the weight recorded from the district tare registers. Any unusual difference found should at once be brought to the notice of the Factory Superintendent by the weighing officer. In addition to selecting jars at random, such jars as show a marked increase or decrease over district weighments should also be set aside for washing.

94. When a jar is broken, either in transit or at the Factory, the weighing officer will note the fact by writing the letters B.T. or

* This should also be done in case of any marked exception from the general decrease in the weight o the rest of the jars in the challan of the same class.

B.F., as the case may be, in the column of remarks of the challan register. He will be guided in this duty by referring to the broken jars register of the Import Officer. Jars broken at the Factory, which would not appear in the above register, will be weighed by the weighing officer according to instructions laid down in Chapter IV, Section (i), Rule 79, and the net weight of jar and opium, after deducting average* weight of basket and straw, will be entered in the column of remarks of the challan register. Both in the case of jars broken in transit and at the Factory, columns 6, 7 and 8 of the challan register will be left blank.

95. Good and inferior opium, dhoi, scrapings and pussewah will immediately after weighment be removed† to the parakh ground and arranged there by mohurirs, under the superintendence of the Import Officer, and in accordance with instructions laid down in Section (iii) of this Chapter for parakh the next morning by the Opium Examiner. Jars or pots of assamiwar, suspected or burnt opium will be removed after weighment to the laboratory, and the Import Officer will take from the Assistant Opium Examiner a receipt for them in a book kept for the purpose (Factory Form No. 36).

96. At the conclusion of the weighment of each challan, the weighing officer will enter the names of the mohurir and dandidar in the place prescribed on the first page of the challan register, and will himself sign the English and vernacular copies of the register, and at the close of the day's work will make them over to the Import Officer, who will be responsible for them until after the challan has been parakhed, when he will forward the English copy to the laboratory, and the vernacular copy with the tare register to the Audit Department, in each case taking the acknowledgment of the responsible officer in a receipt book kept for the purpose.

97. The weighing officer will make no erasures in the challan registers; mistakes made by him should be run through with pen and ink, the correct figures written immediately above, and his initials affixed to every such correction. At the close of each day he will submit to the Factory Superintendent in the report book supplied to him for the purpose a brief note of the day's work, mentioning in it any points, connected with the challans weighed by him, which he considers deserving of notice.

98. The Import Officer will at the close of the day's work lock up the weights and scales; and will submit, for the information of the Factory Superintendent, a statement (Factory Form No. 37) showing the number of challans and jars weighed off during the day.‡ He will also forward to the Assistant Opium Examiner, for each challan of opium weighed (except assamiwar, suspected, burnt and dhoi), a copy of assay

* The weighing officer need not go through the process of obtaining the average as described in the foot-note to Chapter IV, Section (i), Rule 79. He will find the average of basket and straw for most challans given in the import officer's register (Factory Form No. 30).

† Broken jars of opium, or tagars of opium, when a jar has been emptied out for verification of the weight of the empty jar, will not be laid out in the parakh ground immediately after weighment, but will be kept locked up in the jar godown until the next morning, when, just before parakh, they will be deposited in their proper places on the parakh ground.

‡ The rules in this and the next two sections refer primarily to the weighment of jars included in the challan register for good opium (Opium Form No. 72). They, however, equally apply, *mutatis mutandis*, to the weighment of jars and pots of all other descriptions of opium. Small pots should be weighed on a scale of a suitable size.

slip in triplicate (Factory Form No. 38) with the heading written up, and the memorandum at foot showing the number of breakages in transit and the condition of packing duly filled in and signed by him, in the left hand or "original" copy only.

SECTION III.

Hand parakh.

99. As a rule, the jars (and pots) weighed off each day will be parakhed on the next working day, the parakh beginning in the early morning.

100. For this purpose, on the day previous to parakh, the jars, as they are weighed, will be arranged by mohurirs according to challans under the supervision of the Import Officer in verandahs or other space set apart by the Factory Superintendent as the parakh ground, and they will remain there for the night. If for want of verandah-room the jars have to be left for the night in the open yard, they must be carefully protected by being covered with tarpaulins.

101. For parakh, the jars of each challan will be arranged, class by class, according to the district officer's classification; and the jars of each class will be arranged in the order in which they are entered in the abstract of the challan register.

102. Parakh will be conducted by the Factory Superintendent and by the Assistant Opium Examiner, should the Factory Superintendent see fit to associate him in the work. The word "Opium Examiner" as hereafter used in this section will denote either the Factory Superintendent or the Assistant Opium Examiner.

103. Everything being ready and the Factory Superintendent on the parakh ground, the Import Officer will supervise the removal of the jar covers and lids, challan by challan. Then, with the assistance of a certain number of his coolies, trained for the purpose, he will have the surface of the opium in each jar carefully wiped with a damp cloth, and all dust or mould removed, and any crust which may appear to be too dirty or lumpy, or of too high a consistence for provision opium, will be set aside in tagars and ticketed with a large letter "L" before being sent into the malkhana, where it will be stored in the vat set apart for opium for lewa manufacture. Each jar will then be searched by hand for potsherds and other foreign substances.

104. The Opium Examiner will follow the searcher, and with the assistance of one of the permanent parkhias will examine each challan in its turn, jar by jar, in the order in which the jars are entered in the parakh paper* (Factory Form No. 39), beginning, as regards each challan with the jars of the highest class according to the district officer's classification. Those challans that are lying out in the open yard will be parakhed first, so that immediately on receipt of the assay slip they

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* A separate parakh paper for each challan will be prepared on the day previous to parakh in the office of the Factory Superintendent from the abstract of the challan registers, and will be forwarded to the Import Officer on the close of the same day. The jars will be entered in them, class by class, commencing with the highest class.

may be moved into the malkhana, and thus escape lengthened exposure to the sun.

105. A mohurir in attendance will call out the number of each jar in its turn; and the parkhia thrusting his hand into the opium will take out a fair average sample. The Opium Examiner having, with the help of the parkhia, satisfied himself as to the quality of the opium as regards colour, aroma and texture (a plate being used for rubbing down if necessary), the parkhia will call out its class* for the approval of the Examiner. A specimen of the size of a large walnut will then be thrown by the parkhia into a tagar or patri† bearing a distinguishing mark, and the Opium Examiner will enter, in column 2 of the parakh paper, the class of the jar, and in column 5 the distinguishing mark of the tagar (or patri). At the same time the mohurir will chalk on the jar the class mark assigned to it.

106. Where the opium, in the opinion of the Examiner, should not be used for the central mass of the cakes, but is fit for abkari or lewa, the mohurir will draw a chalk line round the neck of the jar, and will write the letter A or L, as the case may be, after the class mark, the Examiner at the same time entering the same letter in the remark column of the parakh paper. Should the Examiner consider the opium in the jar, besides being set aside for abkari or lewa, liable also to a penalty on account of the presence of some impurity, or of an undue quantity of pussewah, he will enter such penalty in column 3 or 4 of the parakh paper; and if he has reason to think that a specimen of the jar if thrown into the tagar containing good specimens of the class would affect the assay of the tagar, he will send the specimen separately on a patri.

107. In each tagar will be placed not more than twelve specimens taken from as many jars, all of which are adjudged by the Examiner to belong to the same class, a fresh tagar or patri will then be brought into use. A fresh tagar or patri will also be brought into use as often as the examination of each new class of jars, as classified by the district officer, is commenced; as well as with a new challan. As each tagar or patri has its proper number of specimens thrown into it, it will be placed in a box with duplicate keys, one of which will remain with the Import Officer, and the other with a responsible officer in the Laboratory Department.

As soon as a box is full it will be locked and sent to the laboratory, and when the examination of the challan is over, the Examiner will initial and date the parakh paper, will enter upon it the name of the native parkhia, and will send it, locked up in the last box of the challan, into the laboratory.

108. The penalty‡ that an Opium Examiner may inflict on a jar of opium sent in as good by the district officer will not exceed 8

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* If the steam tables show that the parkhia is frequently 'out' in his parakh, the Examiner should make him draw single specimens from some of the jars daily for assay until mistakes are less frequent. He will find this an excellent method of controlling estimate by touch.

† When any particular class does not contain more than two jars, a patri will be used for those jars, instead of a tagar.

‡ The penalty inflicted by the Examiner on the opium of a jar passed as *good* by the district officer is not deducted from the value of the opium due to cultivators (*vide* Chapter IV, Section vi, Rule 165). Penalties inflicted by the Examiner will tend to show the quality of a district officer's work, and act as a check on it.

kutchas in a seer of 64 kutchas, or one-eighth of the full amount. If, in the opinion of the Examiner, the opium is liable to a heavier penalty than 8 kutchas, the jar will be set aside for examination in the presence of the Opium Agent. Daily at the completion of parakh the Assistant Opium Examiner will cause to be entered in a register (Factory Form No. 40) all penalties inflicted by the Opium Examiner on jars of opium challaned as *good* by district officers; a copy of this register will be submitted weekly by the Factory Superintendent for the information of the Opium Agent. Jars on which penalties have been inflicted by the Assistant Opium Examiner will invariably be examined by the Examiner himself before they are removed from the parakh ground.

109. After the completion of the day's parakh the Import Officer will make over to each zilladar who came in charge of the parakhed challans a discharge certificate (Factory Form No. 41), after having it countersigned by the Factory Superintendent. The zilladars will then be free to return to their districts.

110. At the conclusion of each day's parakh the Import Officer will prepare a "Daily Parakh Report" (Factory Form No. 42), showing the challans and number of jars of each description of opium parakhed during the day. This he will forward to the Audit Office, where the figures showing the gross weight of each challan will be entered from the receipt register of challans prescribed in Section (vi) of this Chapter, with details of confiscations of all descriptions, and of burnt opium set aside for extraction of alkaloids; the malkhana stock book (Factory Form No. 43) will then be written up in the Audit Office, on the receipt side, from the receipt register mentioned above, a deduction of 5 chittacks per jar and ½ chittack per pot being made on account of adhesion in importing. The daily parakh report will then be sent to the Factory Superintendent's office, where it will be checked as to the number of jars and pots with the statement of weighments (Factory Form No. 37) submitted in the previous evening (these two statements always agreeing), and it will then be used for entering in the proper column of account No. 1 of the "Factory Stock Account" the number of jars and pots examined, and for the preparation of accounts Nos. 2, 3 and 4 of the same stock account.

SECTION IV.

Testing and assay.

111. As each box from the parakh ground reaches the laboratory, the officer in charge will open it and make a list of the tagars and patris, and on the arrival of the last box of the challan will compare their number and their marks with the entries made by the examiner in column 5; he will then make the necessary entries in the memorandum at the head of the parakh paper.

112. The samples in each tagar or patri will then be thoroughly hand mixed, and from each resulting mass will be taken a specimen weighing about 100 grains. This will be boiled for three minutes in

about an ounce and a half of distilled water in a small copper saucepan over a charcoal fire, being meanwhile broken down and well stirred with a glass rod. The decoction will then be poured into a filter of Nepal paper resting in a tin funnel, the filtrate being received into a small beaker bearing a ticket with the tagar or patri mark, and standing in a small trough of water in order to allow the filtrate to cool.

113. As soon as the filtrates belonging to a challan have sufficiently cooled, the glasses, together with the filters in their funnels, will be brought to the Assistant Opium Examiner, or to the Laboratory Assistant (in the absence of the Assistant Opium Examiner on parakh duty) if the Factory Superintendent considers that officer competent to perform the duty independently, who will apply the iodine test for starch to the contents of each glass in turn. Should the filtration in any case be unduly slow, while the test shows the opium to be free from starch, the filtrate will be tested for gum or mucilage.

114. Should the solution obtained from any group of jars indicate the presence of starch, or fail to filter readily, the Assistant Opium Examiner (or the Laboratory Assistant in the absence of that officer) will at once bring the matter to the notice of the Factory Superintendent, who will have the jars of that group sent to the laboratory, and will cause each jar of it to be tested separately. When the jar in fault is discovered, the whole of the opium will be carefully taken out in parcels of 4 or 5 seers at a time. Each such parcel will then be separately tested, and such part of the opium as may be found to be fit for use will be released and sent to the malkhana for the lewa opium vat. Such part as may be found unfit for use will be sent to the deposit room of the laboratory, and will be kept there until the Agent's orders have been passed regarding it, the Factory Superintendent noting, with his initials, in the remarks column of the parakh paper and the challan register, against the number of the jar, the quantity of opium that has been set aside for impurity and held in deposit.

115. In addition to the specimens referred to in Rule 112, there will also be taken from each tagar three specimens of 100 grains each, which will be very accurately weighed on assay scales by assay tellers under the supervision of the Laboratory Assistant. In the case of a patri which contains samples from a maximum of two jars only, a single specimen of 100 grains will be sufficient. As each sample is weighed, it will be placed upon a separate porcelain plate on which will be written in ink the tagar or patri mark, and the name of the weigher. The plates will then be placed upon the steam table, and all the samples thoroughly dried.

116. When all the specimens of a challan are thoroughly reduced to dry powder, the Assistant Opium Examiner will begin the weighing, the result being recorded by the Laboratory Assistant in columns 5 to 7 of the assay register (Factory Form No. 44). In the case of tagars, the plates will be brought from the steam tables to the assay scalein groups of three, all three bearing the same distinguishing mark and representing one tagar. When the specimens from the tagars of a challan are weighed off, those from the patris will be weighed. The mean consistence of the specimens will be shown in column 8, and the

consistence at which the opium is to be paid for in column 9. The figures in column 9 will be obtained from those in column 8, fractions of a degree below ·50 being rejected and above ·49 being counted as a full degree.

When any two out of the three samples of a tagar differ by more than $\frac{3}{4}$ths of a degree, all three specimens will be rejected and fresh samples will be taken from the tagar, the word "repeated" being written against the tagar in the assay register, and the fresh results being recorded at foot of the entries of the challan in the register. When all three specimens are within $\frac{3}{4}$ths of a degree, but the mean consistence of the tagar or patri exceeds the highest, or falls below the lowest, degree of the class assigned by the Opium Examiner by more than 2 degrees, then fresh samples will be drawn from all the jars represented by the tagar or patri, and the fresh tagar or patri assayed as laid down above. The results thus obtained will be shown at the foot of the assay register, and on the assay slip the word "repeated" will be written against the group for the information of the district officer.

117. The challan having been assayed and tested as above, the Laboratory Assistant will complete column 5 of the parakh paper from the assay register, and will then prepare the first or original copy of the assay slip (Factory Form No. 38), already received from the Import Officer, showing (*a*) the district parakh of the jar or jars, and the number of jars in each class; (*b*) the Factory parakh of the jar or jars represented by each tagar or patri, and the number of samples (representing jars) in each; (*c*) the assay consistence of the jar or jars represented by each tagar or patri; (*d*) the jars on which fines have been imposed; and (*e*) the result of the test for starch or gum, &c. The assay slip will then be made over to a clerk, who will copy the entries of assay, &c., from the original into the duplicate and triplicate copies. As each assay slip is ready it will be signed by the Assistant Opium Examiner, and will be submitted at once with the parakh paper to the Factory Superintendent, who, if he finds everything in order, will initial the assay slip on all three copies and return it. The Assistant Opium Examiner will then retain the first, or "original," copy for despatch by the same day's post to the district officer concerned for his information and guidance. He will forward the duplicate copy to the Assistant Factory Superintendent as his authority for receiving into his charge in the malkhana the jars and pots that have passed the assay; and the triplicate he will forward with the parakh paper to the Import Officer. The Import Officer, immediately on receipt of the papers, will have the figures of assay prominently written in red chalk by a mohurir on the jar ticket of each jar, the mohurir signing his name on the back of the parakh paper, on the conclusion of the work, in token of its having been correctly performed. The Import Officer or his assistant will then check the assay figures on the jar, with the assay slip, referring if necessary to the parakh paper, and will initial the slip and at once return the parakh paper to the Laboratory for disposal.

118. When the district officer's classification is markedly incorrect, he will be informed at once by telegram of the result of the assay. Telegraphic intimation of the result of assay of first challans will also be sent to those officers who may ask for it,

119. Having completed the testing and assay of the day's challans, the Laboratory Assistant will fill in columns 10 to 13 of the English copy of the challan register, obtaining the figures for the first column (showing the assay consistence of each jar) from the assay register, and those for the other three columns (showing the parakhing officer's objections as to quality) from the parakh paper. This done, the Assistant Examiner will check the entries made by the Laboratory Assistant, and will sign the challan register in proof of its correctness. He will then forward the completed challan registers, as well as the parakh papers, to the Audit Office, taking a receipt for them in a book kept for the purpose. The figures for the remaining columns of the challan registers will be worked out and entered against each jar, and the whole of the unfilled entries will be written up in the vernacular copy by the Audit Office, as laid down in section (vi) of this Chapter.

120. The Assistant Opium Examiner and Laboratory Assistant will be careful that no one who is not on duty is admitted into the laboratory while opium assays are being conducted; and that there is no communication between the work-people of the laboratory and the parakh ground establishment or zilladars.

SECTION V.

Inferior and other descriptions of opium.

121. The receipt and weighment at the Factory of all descriptions of opium, pussewah, dhoi, &c., not included under the head "good opium," will be conducted, *mutatis mutandis*, in the manner laid down for good opium in sections (i) and (ii) of this Chapter.

122. "*Inferior Opium.*"—This is of two kinds—(i) "Pani amez," or opium with which water has been mixed; (ii) "Pussewah amez," or opium either adulterated with pussewah, or from which the pussewah has been insufficiently separated by the cultivators.

123. The jars of inferior opium after weighment will be laid out on the parakh ground, under the superintendence of the Import Officer, in the same manner as jars of good opium. These jars will also be parakhed and assayed in the manner laid down in sections (iii) and (iv) of this Chapter. The examination, however, of all inferior and other descriptions of opium not included under the heading "good," or lumberdar's khurchun, must be conducted by the Opium Examiner himself, and the duty will under no circumstances be delegated to the Assistant Opium Examiner.

124. As the penalties (other than confiscations), adjudged upon such opium for the presence of water or excess of pussewah, will be levied from the cultivators in calculating the price to be paid to them for their opium, special care must be taken by the Opium Examiner in their assessment. All such penalties will be entered by him against the jars on which they are imposed in the column of the parakh paper provided for the purpose, and the Examiner will note also against the jar on the parakh paper the letters A or L as he considers the jar to be fit for abkari or lewa manufacture, the mohurir with him drawing a

chalk ring round the necks of all such jars and writing the letter A or L, as the case may be, after the class mark.

125. As a general rule, opium classed by the district officers as "inferior" will be considered as unfit for the central mass of provision cakes, and will be set aside for lewa or abkari manufacture as laid down above. But if, in the Opium Examiner's opinion, the district officer's classification is manifestly incorrect, and he passes any jar without a penalty, the opium of the jar will be treated like all other good opium, and will be passed into the malkhana as such.

126. In all cases of inferior opium challans district officers will be furnished for their information with an assay slip in the same manner as for good opium challans as laid down in section (iv) of this Chapter, the penalties imposed on the jars being shown in groups, and not in detail, in the proper column. The challan registers of inferior opium will be treated as regards standard computation in precisely the same manner as good opium challans, except with regard to fines (*vide* foot-note to Rule 165).

127. *Assamiwar Opium.*—Under Rule 220, Section (i), Chapter V of part II of the Opium Manual, a cultivator who dissents from the classification of the district officer is at liberty to ask that his opium should be sent in separately for examination at the Factory, and in all such cases the opium is classed "assamiwar," and put into a separate pot by itself. It is the duty of the district officer to inform the cultivator of the date on which the parcel is despatched from the district, and to furnish him with a written order of attendance at the Factory, so as to enable him to attend there at the examination of his opium if he pleases.

128. It will be the duty of the Factory Superintendent to consult, as far as possible, the convenience of the cultivators who wish to be present at the examination of their opium, and not to keep them waiting longer than is necessary; but should no cultivators appear within ten days of the receipt of an assamiwar challan, the Factory Superintendent will dispose of it on its merits in the ordinary way.

129. After weighment (*vide* Rule 95) the pots of a challan of assamiwar opium will be sent by the Import Officer to the laboratory to await examination by the Opium Examiner. If the cultivator appears within the appointed time, his opium will be examined, tested and assayed (and if he wish it, reweighed) in his presence by the Opium Examiner. All pots of opium of this class will be dealt with in the manner laid down for good opium, a parakh paper being filled in by the Opium Examiner for each challan. After parakh and assay the appropriate entries will be made in the challan register from the parakh paper by the Assistant Opium Examiner, who will deal with the chellan register in the ordinary way; and the cultivator will be furnished with a certificate signed by the Opium Examiner in the form of an extract from the challan register, when he will be at liberty to return to his village.

130. *Suspected Opium.*—When opium delivered by a cultivator to a district officer is suspected of being adulterated with any foreign substance, or rendered unfit, by any process, to be placed in a jar with other parcels, it is separately sealed up and forwarded to the Factory as "Suspected" opium.

"Should inferior opium be fined by the Opium Examiner for adulteration or deterioration other than by water or *paswa*, the Opium Examiner will specify separately the fines imposed (*a*) for water or *paswa*; (*b*) for other adulteration or deterioration."

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131. Challans of suspected opium after weighment (*vide* Rule 95) are sent by the Import Officer to the laboratory for the necessary examination by the Opium Examiner; and cultivators whose opium has been sent in as "suspected" are at liberty to* attend at the examination of their opium, provided they give notice to the Factory Superintendent at the Factory of their presence.

132. Suspected opium weighed off one day will be examined and disposed of on the next working day. On the morning of the examination the pots of each challan will be ranged in the laboratory in the order in which they appear in the challan register, and in the presence of the Assistant Opium Examiner the cloth covers and lids of one challan at a time will be removed.

133. One of the permanent parkhias, under the personal supervision of the Assistant Opium Examiner, will then turn over the crust of each pot of the challan, and take from the centre a fair sample of about 50 grains, which he will place carefully in a saucepan bearing a ticket with the number of the pot on it. Each saucepan will then receive about an ounce of distilled or condensed water, and the contents will be boiled for about three minutes, the opium in the saucepan being broken down and continuously stirred with a glass rod.

134. The decoction will then be poured from each saucepan into a funnel holding a Nepal paper filter and standing in a glass to which is affixed a ticket bearing the same number as that marked on the saucepan. The transfer of the decoction from each saucepan to its filter must be made slowly and carefully, so that any heavy insoluble matter may remain in the saucepan. The Assistant Opium Examiner will supervise the filtration, and will have the glasses with the funnels and filters arranged after cooling, in their consecutive order, on the Opium Examiner's table. Saucepans which contain any heavy insoluble matter will also be retained by him.

135. At the appointed hour, generally about 1 P.M., when all arrangements are ready, the Opium Examiner, assisted by one of the permanent parkhias, and with the Assistant Opium Examiner seated beside him, will proceed to examine each pot singly. The Opium Examiner will have before him the suspected challan register, in order to refer to column 6 for ascertaining the despatching officer's reason for suspecting the purity of the opium; and also a laboratory parakh paper (Factory Form No. 45) in which the numbers of the pots have been previously filled in, according to the challan register, by one of the laboratory clerks. The Assistant Opium Examiner will have before him the necessary chemicals and apparatus for applying any test that may be necessary.

136. The examination of the pots of a suspected challan will proceed in serial order from the first pot shown in the challan register. The pot will be placed before the parkhia, who will take out with his hand a sample of the opium, and the Opium Examiner with the help of the parkhia will subject the opium to a careful physical examination by sight, touch and smell. The second parkhia will assist the Assistant

* Under Chapter V, Section (i), Rule 234, footnote of Part II of the Manual, district officers are instructed to give notice to any cultivators who desire to attend at the Factory of the date of the despatch of their opium from the district.

Examiner in subjecting the decoction, representing each pot, to the starch test. If any special adulterant is suspected or noticed, the test for it will be applied; or the sample will be subjected to a microscopic examination if necessary.

137. If in the opinion of the Opium Examiner no grounds exist for suspecting a parcel of opium, and the reason assigned by the despatching officer appears from examination to have no foundation, the opium will be passed for lewa purposes without a penalty, its class by hand parakh will be called out by the parkhia, the degree of consistence will be entered by the Opium Examiner in column 2 of the parakh paper, a chalk ring will be made round the neck of the pot, and it will be put on one side.

138. In the matter of penalties and confiscations considerable discretion is allowed to the Opium Examiner, which should be exercised with judgment, as on the one hand he has to act fairly towards the cultivator, while on the other he is bound to protect the provision of the Factory from the admixture of opium which is adulterated or deteriorated.

139. Under the first head, fairness to cultivators, it is his duty to make sure whether a parcel has been intentionally or accidentally adulterated. In accidental cases the matter is always brought to the notice of the district officer in the first instance, and if he is satisfied as to the truth of the cultivator's statement, he will have made a note of it against the pot in the remark column of the challan register. In such cases a deduction will be made to the extent* (roughly in weight) of the foreign matter present, the consistence will be assigned, and the Opium will be disposed of for any use the Opium Examiner may think fit. Failing such remarks of the district officer, the Opium Examiner must accept a case of adulteration as intentional.

140. Intentional cases of adulteration or deterioration may be divided into two heads—(*i*) where the opium has been rendered unfit for Factory use; (*ii*) where the adulteration or deterioration is slight and the drug, which has not been materially affected by it, can be utilized for lewa manufacture.

141. Under the first head will come all adulterations which alter the nature or character of the drug, such as starch, sugar, carbonate of soda, vegetable pulps and extracts and other substances enumerated in the chapter† on adulterations. Where such adulterations exist, the opium should be confiscated; it should also be confiscated where the opium has deteriorated by being largely deprived of its soluble matters, by washing with water.

142. Under the second head, the discretion of the Opium Examiner will come largely into play. Such substances as sand, dust, the impure washings of opium plates, poppy petals, poppy seeds and articles of a like nature, are frequently mixed with opium. Where they are in small quantities, they are innocuous in the preparation of lewa, and the opium may be passed for this purpose with a penalty graduated according to the measure of the adulterant, and designed

* Penalties adjudged, or deductions made, on opium are expressed in kutchas, or $\frac{1}{64}$ths of a seer.

† *Vide* chapter on "Adulterations of opium and their detection."

also to act as a deterrent. Opium deteriorated in a slight measure by washing would also come under this head. Penalties on opium of this character would vary, according to the circumstances of each case and the discretion of the Opium Examiner, from two kutchas, the minimum, to 32 kutchas, the maximum, in one seer of 64 kutchas. If in the opinion of the Opium Examiner the parcel is deserving of a higher penalty than half its actual weight, it should be confiscated.

143. As the examination of each pot proceeds, the details of penalty, confiscation, reasons of the Opium Examiner for his action, the consistence according to hand parakh of the parcel, and the use to which it is consigned, will be entered by the Opium Examiner against the pot in the parakh paper, in their proper columns, and the clerk standing by will at the same time make a distinguishing mark with chalk on the pot denoting that it is set aside for lewa or other use, or is confiscated. The pot will then be placed, until the close of the examination, in the group representing the use to which it has been consigned.

144. At the close of the examination the Opium Examiner will sign and date the parakh paper. The Assistant Opium Examiner will then count the number of pots in each group, representing the number set aside for lewa, abkari, for the extraction of alkaloids, and the number confiscated, and will compare the number of each with the number shown in the parakh paper, and if he finds everything correct, he will at once cause all the confiscated pots to be closed up and placed in the deposit room (of which he keeps the key) in the portion allotted for the subdivision to which the pots belong, and will enter their numbers in column 6 of his register of pots examined (Factory Form No. 46).

The number of pots assigned to Factory purposes will then be entered in column 7 of the same register, and the pots with the register will be sent to the malkhana under safe custody. The Assistant Factory Superintendent will count the number and sign in the proper column of the register as having received the pots, which will then be emptied out into the vats for which they are designed. The Assistant Opium Examiner will, on receiving back the register, initial it in the proper column.

145. Having disposed of the pots, the Assistant Opium Examiner will then enter the result of the examination, as shown in the parakh paper, in columns 12 to 17 of the English challan register, will note in column 27 the use to which each pot has been put, and will sign the register, which he will forward as soon as possible to the Audit Department, taking a receipt for it. The first action to be taken by the Audit Department in the case of "suspected" challans is to strike the totals up to column 16, to add up the net weight of opium consigned to each use by the Opium Examiner, to fill up a memorandum (Factory Form No. 47) with these details, and to submit it, without delay, with the signature of the Head Auditor, to the Assistant Opium Examiner as his authority for writing up his stock book of confiscated opium, &c (Factory Form No. 48), which will be submitted, whenever any entries are made, for the inspection and initials of the Factory Superintendent.

146. *Burnt Opium.*—Under this head is included opium which has suffered from the action of smoke, as well as opium which has been injured by exposure to fire.

147. The manner of treatment for burnt opium pots after weighment will be precisely the same as for suspected opium. If in disposing of burnt opium challans the Opium Examiner finds in any case a certificate on the challan register duly signed by the district officer showing that he has satisfied himself that the injury was accidental, then such parcels as are free from adulteration, only slightly smoked, and in the estimation of the Examiner fit for lewa purposes, will be passed by him without a deduction or penalty, at the consistence of the drug estimated by hand parakh. If the opium is so injured as to be unfit for Factory uses, though free from adulteration, it will be set aside for the extraction of alkaloids, but passed, at the same time, for payment at 70° consistence on the net weight of the contents of the pot.

If the challan register shows no certificate of the district officer that the injury to the opium of a pot was accidental, then it will be disposed of by the Opium Examiner on its merits in the same manner as a pot of suspected opium.

148. At the conclusion of the examination of a challan of burnt opium, the Assistant Opium Examiner will close up such pots as have been confiscated, and will place them in the deposit room in the manner prescribed for suspected pots. Those pots that have been passed for payment, but are set aside for the extraction of alkaloids, though included in the number shown in column 6 of the register of pots examined, will be removed to the morphia room, and those set aside for lewa will be sent to the malkhana in the manner prescribed in Rule 144 for suspected pots.

149. The Audit Office on receiving these challans will strike the totals as in the case of suspected challans, and in the memorandum (Factory Form No. 47) submitted to the Assistant Opium Examiner will note separately the net quantity assigned, (*a*) to the malkhana, (*b*) for the extraction of alkaloids, (*c*) to the deposit room as confiscated, to enable the Assistant Opium Examiner to write up his stock book of confiscated opium, &c.

150. *Pussewah.*—The jars of pussewah after weighment will be ranged on the parakh ground, and will there be examined by the Opium Examiner in the way prescribed for good opium ; those jars passed by the Opium Examiner as good will have the letter P marked on them with chalk, and when the assay slip is received the consistence will be marked on them, and they will be conveyed to the lewakhana, where they will be emptied into the pussewah vat. The procedure regarding the acquittance of the Import Officer with respect to jars of pussewah will be the same as that laid down for good opium jars in Section (vii), Rule 177 of this Chapter, the acquittance being obtained from the lewakhana Assistant instead of the Assistant Factory Superintendent.

151. The quantity of pussewah received on any day will be calculated in the challan registers by the Audit Office, and the result, reduced to 70° consistence, will be communicated by the Head Auditor (in Factory Form No. 49) to the lewakhana Assistant, and this will be

the authority for that officer to enter the quantity in column 6 of his stock book of material for lewa.*† Pussewah found by the Opium Examiner to be so adulterated as to be unfit for Factory use will be confiscated and held in deposit like confiscated opium.

152. *Government scrapings.*—These will be dealt with in the manner prescribed for good opium, except that the consistence may, at the discretion of the Opium Examiner, be determined by hand parakh instead of by assay.

Should the opium be found fit for use, it will be passed for lewa purposes; if found unfit, it will be confiscated and sent to the deposit room. All such opium declared to be fit for use will pass through the malkhana.

153. *Dhoi*—Received from the districts will have been specially prepared under separate instructions, so as to reduce bulk. The method of preparation renders it unsuitable for use in lewa manufacture. District dhoi will therefore be examined by the Opium Examiner with a view to ascertaining that it has been properly prepared, and will be passed for morphia manufacture without test or assay. The Import Officer will send these jars after parakh to the laboratory, and will obtain the Assistant Opium Examiner's acknowledgment for them in the receipt book kept for the purpose. The net amount of dhoi received will be credited in the stock book of confiscated opium, &c., from the memorandum supplied to the Assistant Opium Examiner by the Audit Office.

154. *Kuffa.*—The jars containing kuffa rags, after being weighed in the usual manner, will be forwarded to the laboratory.

About a $\frac{1}{4}$ oz. of rag from each jar will be boiled in ten drams of distilled or condensed water, and the filtrate tested in the usual manner.

If found free from starch, the rags from each jar will be steeped (in a tub or tagar) in just sufficient cold distilled, or condensed, water to cover them. When properly softened, the rags will be opened out and washed by hand; they will then be wrung out and rinsed in a small quantity of water, so as effectually to remove all soluble matter. The two solutions will be mixed together and thrown upon a blanket filter. The filtrate will be measured, and a fractional quantity will be evaporated by steam. The extract will be examined physically and (if found fit for Factory use) it will be weighed, and its consistence determined by assay.

155. The amount of extract contained in the whole solution will then be calculated, and the necessary entries will be made by the Assistant Opium Examiner in columns 10 to 14 of the challan register. The calculated quantity of extract will be passed for payment by the Audit Office at the same rate as for pure pussewah, viz., at Rs. 3-8 per seer of 70° consistence, a memorandum of the quantity being sent in the same manner as for pussewah to the Assistant in

* When issuing pussewah for the manufacture of lewa care should be taken to show the issue not by its gross weight, but by its equivalent at 70° consistence, which should be calculated from the assayed consistence of the pussewah each time it is required for use.

† The authorized allowance of five chittacks for each jar and half chittack for each pot for adhesion should be calculated by the Audit Office on the total delivery of pussewah, and the necessary deduction made, under authority of the Factory Superintendent at the close of the weighments, in the stock book of material for lewa.

charge of the lewakhana. The solution (together with the extract) will be forwarded from the laboratory to the lewakhana, and will there be evaporated, stored, and accounted for as pussewah.

156. All parcels of opium ordered by the Opium Examiner to be confiscated will remain in the deposit room for three months, so that they can be re-examined, or any references in connection with them answered, in the event of appeals being lodged by cultivators to the Opium Agent, or references being made by district officers. At the end of three months the Factory Superintendent will submit to the Agent a statement of the quantity of opium held in deposit from each of the different descriptions of opium sent in by district officers; and will formally ask for sanction to its disposal for the purpose of extracting alkaloids. On receipt of the Agent's sanction the necessary adjustment will be made in the stock book of confiscated opium, &c.

SECTION VI.

*Standard Computation.**

157. On receipt of the challan registers, the vernacular copy with tare register from the Import Officer, and the English copy from the Assistant Opium Examiner, the Audit Office will be in possession of all the papers necessary for reducing the gross opium of a challan to standard consistence. These challan registers will, on receipt, be entered in a register (Factory Form No. 50) called the "Receipt register of challans," and will then be distributed among the clerks and mohurirs for the necessary entries and computations to be made.

158. The work will proceed as follows:—

(*i*) The entries in columns 1, 2, and 3 of the English challan register will be compared with the corresponding figures in the tare register; the jars shown as "broken" in the tare register should also be marked as "broken" in the challan register, if not already so done by the district officer.

(*ii*) The English and vernacular copies of the register will then be compared with each other up to column 5.

(*iii*) The clerk and the mohurir will then check, independently, the additions up to column 5 of the English and vernacular copies respectively.

(*iv*) Column 6, showing the result of the Factory weighment of a jar, will then be compared with the result of the weighment of the jar at the subdivisional test-scale, as shown in the tare register, note being taken of the explanations given by the district officer in the tare register for each case of difference exceeding 4 chittacks, between the original and the test-scale weight at the subdivisions.

159. All discrepancies found, as well as unusual differences by Factory weighment, as compared with the weighment at the subdivisional test-scale, will be noticed in a memorandum (Factory Form No. 51)

* The rules in this section, though based on the form in use for good opium, apply, *mutatis mutandis*, to all descriptions of opium.

called "Review statement of challans." This statement will be printed in counterfoil with a form for reply on the reverse, and after submission by the Head Auditor for the Factory Superintendent's signature, will be sent to the district officer concerned for his explanation. The district officer will record his explanation on the points noted, and will return the statement in original to the Factory Superintendent, who will have the discrepancies reconciled in the Audit Office. The review statement will be submitted only when necessary.

160. After despatch of the "Review statement," the results of the Factory weighments, shown in columns 7 and 8 of the challan registers, will be checked, and the net weight of opium in each jar will be entered in column 9 of both the English and vernacular copies by the clerk and the mohurir respectively, each doing his portion of the work independently of the other.

161. For all jars broken before weighment, whether in transit or at the Factory, columns 6 to 8 have been left blank by the weighing officer. In such cases the clerk and the mohurir will calculate the average dryage* of the class to which the jar belongs, and will deduct it from the opium of that jar, entering the net weight after deduction, in column 9. When there is only one jar in a class and it is broken before weighment, the average dryage of the challan is deducted; but if only one jar is sent in a challan and it is broken before weighment, it is then passed at the weight found at the subdivisional test-scale. If, however, the net result of the Factory weighment of a challan shows an increase, the broken jar will be allowed the average increase in the same manner as dryage. The broken jars of a challan will then be compared with the daily memorandum of broken jars submitted by the Import Officer, and cases of unusual differences in weights will be brought to the notice of the Factory Superintendent.

162. The net weight of opium for all jars having been entered in column 9 of the English and vernacular registers in the manner described above, the assay consistence, penalties, and confiscations entered in columns 10, 11, 12 and 13 of the English copy will be compared, under the personal supervision of the Head Auditor, with the original parakh paper received from the laboratory, the parakh paper being, on completion of the day's work, returned to the laboratory duly attested by the Head Auditor. The English clerk will then dictate to the mohurir the figures from the English copy, which will be entered in the corresponding columns of the vernacular register. The figures, from columns 6 to 13 of the English register, will then be compared with those of the vernacular copy. The clerk and the mohurir will then, independently of each other, add all the totals of these columns (except the columns of consistence and fines), and the totals of the two registers will be compared with each other.

163. The entries of columns 1 to 13 of a challan register having been completed, the Audit Office will now—

(*i*) enter in the "Receipt register of challans" the total weight of opium by Factory weighment as shown in column 9;

* Average dryage is obtained by dividing the total dryage of a class (or challan) by the total opium of the class (or challan) as entered in column 4 of the challan register, omitting, of course, the jar or jars broken. Fractions of a chittack up to ·49 inclusive are ignored; fractions exceeding ·49 are accepted as a full chittack.

(*ii*) enter the same total weight of opium from column 9 in the daily parakh report, submitted by the Import Officer to the Factory Superintendent for the preparation of the Factory stock account.

(*iii*) enter in the "Parakh report" the quantity of opium confiscated or held in deposit;

(*iv*) compile a daily report (Factory Form No. 33) showing the challans weighed, the net result of weighment and dryage, and the percentage of breakage in jars, for submission to the Opium Agent, through the Factory Superintendent.

164. The above entries having been made and the daily report, as described above, having been submitted, the clerk and the mohurir will proceed respectively to prepare the *damdeta* of the English and vernacular challan registers, columns 14 to 22, independently of each other.

165. The method of procedure for entries in columns 14 to 17 will be as follows. In the case of opium passed by the district officers as good and challaned under any of the classes VII and upwards, or as lumberdar's khurchun, the fines imposed by the Opium Examiner on the parakh ground, and entered in columns 11 and 12, will* not be deducted from the total of column 9, but the net opium shown in column 9 will be transferred to column 17, except in cases of confiscation which are shown in column 13. In such cases the quantity confiscated† will be deducted from the net amount shown in column 9, and the balance will be given in column 17.

166. The deficit or excess batta‡ of each jar, calculated on the consistence shown in column 10, is then entered in column 18 or 19, the *damdeta* in column 20, and the value of the jar and the rate per seer in columns 21 and 22 respectively. These entries will be made, with the help of tables, by the clerk and the mohurir in their respective copies of the register. As the tables show the rate per seer for jars containing one maund exactly, in all cases where the opium shown in column 4 is not exactly a maund, and also when fines are deducted from inferior opium, the rate per seer will be separately calculated by the clerk and the mohurir.

167. When the net opium shown in column 17 of a challan register contains fractions of a *chittack*, in calculating deficit or excess batta for the jar, fractions up to 2 kutchas will be ignored, and 3 kutchas will be accepted§ as a full chittack.

In calculating *damdeta* for column 20, column 17 will be taken as it stands, without ignoring parts of a chittack.

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* This exemption is allowed for opium passed by the district officers as good. Fines on all other kinds of opium, viz., pani amez, pussewah amez, suspected, burnt and assamiwar opium and pussewah are levied, and the net amount, after deduction of fine, is entered in column 17, or its corresponding one in the burnt, suspected and other challans.

† The value of opium challaned as good by district officers, and confiscated by the Opium Examiner, is not realized from the cultivators, but is, with the sanction of Government, written off to profit and loss in the same manner as irrecoverable balances.

‡ Deficit or excess batta is deducted from, or added to, the net opium which remains in column 17, after deducting any fine which the Opium Examiner may impose on opium other than good.

§ This practice is necessary, as the batta tables do not show fractions of chittacks in the quantity of opium taken.

"The value of opium chalaned as inferior by district officers and confiscated by the Opium Examiner for adulteration or deterioration otherwise than by water or *pasewa*, will not be realized from the cultivators, but will be treated as in the case of good opium confiscated, the payments made by the district officers at the time of weighments being considered final. When such opium is fined for adulteration or deterioration, other than by water or *pasewa*, the fine so imposed will be treated as a fine on good opium would be." 6-9-1900.

168. The *damdeta* of each jar having been obtained in the manner above described, the detailed entries for each jar, from column 14 to column 22 in the English and vernacular registers, will be compared by the clerk and the mohurir. The totals of each class from column 14 to column 22 will then be added up independently in the two registers and compared. If all are found correct, the total of each class will be brought over to the abstract on the last page for obtaining the grand totals of the challan, and these will also be added up independently and compared by the clerk and the mohurir.

169. Finally, the clerk will enter in English figures, in column 23 of the vernacular register, the value of the opium of each jar taken from column 21 of the English register, and will compare his entries with the corresponding figures in column 21 of the vernacular register. The clerk and the mohurir will then sign their names on the backs of their respective challan registers in token of their correctness.

170. The results of the challan will then be registered in the "Detailed General Register of Opium" (Opium Form No. 88), and also in the "Daily Abstract Register of Gross and Damdeta" (Factory Form No. 52). After registration the challan registers will be signed by the Head Auditor and submitted to the Factory Superintendent for signature, and they will finally be countersigned by the Opium Agent.

171. The Head Auditor will submit daily, during the course of standard computation, for the information of the Factory Superintendent a progress report (Factory Form No. 53) of the challan registers received, and the challan registers audited and passed by the Audit Office.

172. The Head Auditor's control over the Audit Office and over the preparation of challan registers must be thorough, and he will be guided in his check by the following outline, which will be strictly adhered to and will be supplemented by the dictates of his own discretion and judgment, so that perfect accuracy in the work of his subordinate clerks and mohurirs may be ensured:—

(*i*) the Head Auditor will review cursorily, on receipt from the laboratory, all English challan registers and note cases of unusual differences between the district and Factory weighment and parakh, requiring explanation from district officers; and also any special points or irregularities requiring the orders of the Factory Superintendent. These notes will be embodied in the review statement;

(*ii*) on the preparation of a review statement (*vide* Rule 159) the Head Auditor will examine it with the challan register, item by item, before signing it and passing it on to the Factory Superintendent for his countersignature;

(*iii*) he will exercise general check over the clerks and mohurirs, in such a manner as to prevent them from copying figures and totals from each other;

(*iv*) at the completion of the work of standard computation of a challan register, and before signing the register himself, the Head Auditor will check the average dryage given to *all* jars which were not weighed at the Factory, owing to breakage or other reasons;

(*v*) he will check the *damdeta* and value of at least 5 per cent. of the jars in each challan;

(*vi*) he will examine the assay consistence given in column 10, and see that no alterations exist without the due attestation of the Assistant Opium Examiner;

(*vii*) he will check the value of the total *damdeta* of each challan, and compare the total *damdeta* and the total value of each English challan register with the corresponding figures in the vernacular copy;

(*viii*) he will initial all cases of alterations or corrections in the figures of both the English and vernacular copies, after satisfying himself as to their correctness;

(*ix*) he will examine the printed certificate on the back of each challan to see that it has been duly signed by the clerk or mohurir concerned;

(*x*) he will examine all entries in the "Detailed General Register of Opium," and also in the "Daily Abstract Register of Gross and Damdeta," and will initial each item in token of correctness.

173. After countersignature by the Opium Agent the vernacular copies of the challan registers will be forwarded from the Agent's office, by registered post to the district officers concerned, to enable them to prepare their final adjustment accounts of cultivators. The English copies will be retained in the Agent's office to be audited under the superintendence of the Head Accountant.

174. On completion of the standard computation for the season the Audit Office will check the calculations in the assay register kept in the laboratory, and will compare the same with the entries of assay shown in the parakh papers. The assay register and parakh papers will then be returned to the laboratory for record. The Audit Office will also compare the entries in the original parakh papers with the corresponding entries in the English challan registers (obtained from the Agent's office) of suspected, burnt and any other descriptions of opium the consistences of which are not recorded in the assay register. All discrepancies found will be entered in an objection statement, and will be submitted by the Head Auditor to the Factory Superintendent, who will forward it, with his countersignature, after examination to the Agent for the necessary corrections in the challan registers.

SECTION VII.

Storage.

175. On delivery to the Assistant Factory Superintendent of the assay slip (*vide* Rule 117), charge of the opium passes to that officer, and he becomes responsible for its storage in the malkhana.

176. The Assistant Factory Superintendent will be assisted in his malkhana duties by one or more extra assistants to be called "Malkhana and Export Assistants." These Assistants, when not actually exporting

opium, will, under the orders of the Assistant Factory Superintendent, exercise general supervision over the work of emptying and scraping jars.

177. The jars will be carried into the malkhana under the supervision of the Import Officer without their baskets by the same coolies who arranged the challans on the parakh ground, and they will be placed beside the vat intended for the opium of the assay consistence to which each jars belongs.

On the completion of this work the Import Officer will obtain, as his acquittance, the Assistant Factory Superintendent's signature on the back of his triplicate copy of the assay slip of each challan delivered in the malkhana, and he will then enter the number and date of each assay slip in column 14 of his Import Register against the challan it represents, and will file the assay slips as his acquittance vouchers.

178. After all the jars have been removed to the malkhana the Import Officer will cause all empty baskets to be taken from the parakh ground to the place set apart by the Factory Superintendent for their storage. There the baskets will be sorted under the orders of the Assistant into whose charge they are made over; those which are serviceable will be stocked for Factory use, or for re-issue to district officers, and those which are unserviceable will be sold by auction or used as fuel for the laboratory boiler.

179. A special mohurir or sirdar, well acquainted with English figures, will be told off to the entrance of the malkhana. Standing on a bench he will call out the consistence of each jar as it passes in, and will direct the coolies to the part of the malkhana where the store vat of the consistence is situated. The cooly as he approaches the place will call out the consistence he has heard from the mohurir, and if it corresponds with the consistence on the vat, he will be assisted in depositing the jar on the ground by another cooly told off for that special consistence. A second mohurir or sirdar will go round and tick off with chalk all jars newly deposited in the malkhana, comparing the jar consistence with the consistence on the adjacent vat to see that the jars have been deposited in the right place. It will be the duty of the two mohurirs to see throughout the day that the jar consistence of all jars corresponds with the consistence marked on the vat into which the jars are being emptied.

180. As a rule, every vat in which provision opium is stored will receive opium of two consecutive degrees of consistence, the figures representing which will be conspicuously painted on the wall of the vat. Each vat will also be distinguished by a letter of the alphabet (excepting the letters A and L), or if the length of the vat is great, by two letters at the two ends, to furnish distinguishing marks when samples are drawn from the vats, or particular portions of the vats, for assay; and the holding capacity of each vat will be painted on it. One vat in the malkhana (or more), if necessary will be reserved for opium intended for abkari manufacture, and a separate vat (or more, if necessary) will be set aside for opium intended for lewa manufacture. These vats will be marked only with the letter A or L respectively, and will have no consistence figures on them.

181. The malkhana sirdar will divide his coolies into gangs, and will tell off one gang or more to each vat into which jars of opium are

to be emptied, and will keep a record of the number of jars emptied by each gang. In emptying a jar as much of the opium as possible will be removed by hand and thrown into the vat, after which the interior of the jar will be lightly and carefully scraped with an iron scraper, and the scrapings (provided the jar is well baked, and is not abraded by the scraper) will also be placed in the same vat. The empty jar will then be carried away to the place set apart for the second scraping.

182. At the place appointed for the second scraping of jars the malkhana sirdar will arrange his coolies in one or two rows, so that each man's work can be easily checked both as to quantity and quality. The empty jars brought from the malkhana vats will be broken up, and the fragments carefully and well scraped until no more opium can be removed without abrading the fragment. Each man's lot of fragments will lie in a heap beside him until the hour appointed for inspection of the work by one of the malkhana assistants. The scrapings will be collected, weighed by the malkhana assistant, and deposited in the vat reserved for it, twice every day, once at the breakfast hour 9 A.M. and once at the close of the day's work. The weight of the scrapings collected on each occasion will be recorded by the malkhana assistant in a book kept for the purpose (Factory Form No. 54).

183. On the completion of the season's operations and before the 31st* March in each year, the stock of unmanufactured opium, if any, remaining in the malkhana will be verified by weighment, by an officer to be appointed by the Agent. The difference between the book and verified balance will represent the dryage in the malkhana, due to evaporation of moisture. Specimens of the opium weighed each day will be assayed in the usual manner and the consistence of the day's weighments will be recorded in the verification statement. The result of verification will be submitted to Agent with the countersignature of the Factory Superintendent, and the Agent will direct the necessary adjustment of the malkhana stock book, which will be done before the new season's opium is brought on the books, or before the 31st March, whichever comes first.

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* Stock of opium should be taken, if possible, before the 31st October in each year.

CHAPTER V.

DHOI AND LEWA.

SECTION I.

Preparation and issue of dhoi.

184. Dhoi is obtained from two sources, viz., from the districts and from the various operations at the Factory. Dhoi obtained from the district is prepared with a view to reducing bulk for transit, and from the manner of its preparation it is rendered unfit for the provision manufacturing requirements of the Factory. It is accordingly set aside always for the extraction of alkaloids. The term "Dhoi" as hereafter used in this chapter denotes only such dhoi as is obtained from the various operations at the Factory, and can be utilized in the manufacture of lewa.

185. Dhoi is of three kinds:—

(*i*) that resulting from the washings of chullan jars;

(*ii*) that resulting from the washings of tagars, planks and vats and of the smeared hands of work-people during the progress of the Factory operations;

(*iii*) that resulting from the washings of cake-makers' cups and trays.

No separate account is kept for the dhoi under each of the first two heads, but the dhoi under the third head is separately accounted for, in order that the quantity obtained, which represents a deficiency in expenditure of lewa on the manufacture of cakes, may be made good to the cakes in lewa at the time of sattai.

186. The Dhoi and Lewa Departments will be in charge of one Assistant, who will be known as the Lewakhana Assistant, and he will be selected by the Factory Superintendent from the permanent staff of Factory assistants.

187. When the Malkhana Assistant has checked the work of his coolies on the scraping of jars, and has weighed in at the appointed hours the scrapings obtained (as laid down in Rule 182), the Lewakhana Assistant will take charge of the broken fragments of pottery, and will have them carried by the dhoikhana staff of coolies, and thrown into the dhoi vats for immersion and washing.

188. The dhoi vats will have been previously filled with well water, and each filling will be made to serve for the washing of pottery until the water has attained the required consistence from opium held in solution, when it may be utilized for lewa purposes. The vats will be charged with the fragments of pottery at about 10 A.M. and 4 P.M. daily;* and the fragments will be allowed to soak until the opium

* It is desirable that the vats should be charged twice, and not only once a day, in order that the consistence of the dhoi may be raised as quickly as possible; the weaker the dhoi, the greater is its tendency to become sour.

adhering to them is sufficiently softened, to be removed from the pottery by means of brushes made of the leaf stalks of the 'tal' or date tree. The pottery placed in the vats on each occasion will be cleaned and removed before the vats are again charged. All straw, gunny, munj string, and pieces of baskets must be carefully excluded from the dhoi vats, as their presence is apt to give rise to fermentation.

189. Dhoi from the dhoi vats (technically thin dhoi) will be considered fit for use when it has attained a consistence of 7° to 10°, and is sound in every way, of a good colour and free from a sour smell. When the dhoi of any vat has reached this stage the Assistant in charge will cease to have any more pottery thrown into it, and will cause the dhoi to be strained through a metal sieve into a separate vat where it will remain for use.

190. During the manufacture of lewa a specimen from the vat of 'thin' dhoi in use will be sent daily to the laboratory by the Assistant in charge for assay with the lewakhana assay register (Factory Form No. 55). This register will be returned with the results and signature of the Assistant Opium Examiner, and if the results are satisfactory, the Assistant in charge will issue as much thin dhoi as may be required for the day,* entering in column 8 of his "Stock book of material for lewa manufacture" (Factory Form No. 56) the gross quantity issued, the assay consistence, and the equivalent quantity at 52·50,° the consistence at which lewa is used. While 'thin' dhoi is being taken out of a vat for use, the contents of the vat will be kept continually stirred until the entire quantity required is taken.

191. At the close of the day's caking during the manufacturing season, the Assistant in charge of the lewakhana will cause the washing of the cake-makers' cups and trays to be removed from the caking room to the dhoikhana, and to be strained without delay† into a special vat. The contents of this vat will be expended day by day before recourse is had to the dhoi from the washings of pottery, the assay consistence being daily taken as prescribed in Rule 190 above, an entry of the quantity used being made in column 9 of the "Stock book of material for lewa manufacture."

192. All tagars and other appliances used in the processes of import and manufacture of provision which have opium adhering to them will be daily brought to the dhoi vats and washed in them, care being taken that no such article is brought to the dhoi vats before it is first well scraped in the departments in which it has been used. Work-people who have been working in opium and have their hands smeared with it will likewise wash their hands in these dhoi vats before leaving the Factory. It will be the duty of the Assistant in charge to keep a strict watch that the vats are kept scrupulously clean, and that the washings are made up of opium and water only.

193. Should any 'thin' dhoi remain on hand at the close of a season's manufacture, it will be inspissated either in an open vat or in

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* The dhoi brought on the stock book of the lewakhana is theoretically the equivalent of the deductions made for adhesion to jars in importing opium into the malkhana (*vide* Rule 110), and for adhesion to tagars, &c., in exporting opium from the malkhana.

† It is important that this dhoi should be strained without delay in order to separate from it any fragments of leaf which, if allowed to remain, would cause fermentation. For the same reason it is desirable that it should be brought into use as soon as possible.

shallow glazed earthenware vessels by exposure to the sun until it attains a consistence of 60° to 70°. When this consistence has been reached, which should be ascertained by sending a specimen to the laboratory for assay, with the lewakhana assay register, the Assistant in charge will cause the dhoi (known as "thick" dhoi) to be weighed and stored in a vat reserved for the purpose in the lewakhana, and will bring the gross quantity, with its consistence and equivalent at 52·50° on to his "Stock book of material for lewa manufacture," column 7.

194. All thick dhoi of a season should be expended during the manufacture of the following season by being distributed in an equal proportion throughout the season's lewa. Should, however, the quantity of thick dhoi be unusually large (a contingency which will rarely occur), the maximum limit of expenditure of thick dhoi permissible in the manufature of lewa is four maunds at 70° to every 100 maunds of opium of a like consistence. The thick dhoi of one season should not be used until all the thick dhoi of the preceding season has been expended.

SECTION II.

Preparation and issue of Lewa.

195. Lewa is a thin paste formed by breaking down opium in water, and mixing with it a certain quantity of pussewah in order to render it smooth and glutinous. It is used for pasting together the poppy-flower leaves which form the shell of the opium cake, and is composed of the following ingredients:—

(*i*) Good opium, fit for the interior of provision cakes.

(*ii*) Opium not considered fit for the central mass of the cakes, viz.—

- (*a*) the upper crusts of jars, when too dry and lumpy for alligation purposes;
- (*b*) dry opium which has escaped from broken jars and has been collected by hand from the straw and baskets, the residuum of the preceding season, separation of which has been effected in the dry cold weather;
- (*c*) opium sent in as "suspected," but found (though not altogether pure) to be free from starch, sugar, oil or other objectionable adulterant;
- (*d*) opium passed as inferior by the Opium Examiner, including pani amez, opium with a broken grain, &c.;
- (*e*) opium containing a large percentage of pussewah;
- (*f*) Government khurchun or "godown scrapings;"
- (*g*) the final scrapings from the broken fragments of challan jars (collected in the malkhana).

(*iii*) Fresh dhoi or Factory washings of jars and vessels, &c.

(*iv*) Old dhoi (the surplus dhoi of the preceding year dried to a consistence of 60° or 70°).

(*v*) Contraband opium when sufficiently free from adulterating substances.

(*vi*) Pure pusssewah and kuffa extract.*

196. The consistence prescribed for lewa at the Ghazipur Factory when ready for use is 52·50°, *i.e.*, anything between 52° and 53° of consistence.

197. The Factory Superintendent will give orders for the manufacture of lewa about ten days or a fortnight before the date fixed for the commencement of caking, and the Lewakhana Assistant will have at least three vats ready, so that, besides the vat which is being used for the day, specimens can be sent from two other vats for assay for the following day's issue, and the one that gives results nearest to the standard consistence will be selected for export.†

198. The proportions of the different ingredients of lewa will be as follows:—

(*a*) Of opium of classes (*i*) and (*ii*) described above, 100 parts at 70° consistence.

(*b*) Thick or old dhoi, not more than 4 parts at 70°.

(*c*) Pussewah, not more than 5 parts at 70°, due allowance being made for its presence in the opium of classes (*i*) and (*ii*) used in the preparation of the lewa. Should that opium contain, in the estimation of the Factory Superintendent, as much as 5 per cent. of pussewah in it, then no free pussewah will be added to the lewa.

(*d*) Thin dhoi, in such quantity as may be required to reduce the whole to the Factory standard of consistence.

199. Opium of classes (*i*) and (*ii*) will be exported from the malkhana under the supervision of the Assistant Factory Superintendent in the manner laid down in Chapter VI, Section (*i*). As the opium enters the lewakhana it will be emptied into one of the lewa vats, and when the full quantity for the day has been received, the Assistant in charge of the lewakhana will, in his presence, have the correct proportion of thick dhoi and pussewah (already laid down in Factory orders by the Factory Superintendent, weighed out and placed in the vat, with the opium. He will then cause about $\frac{4}{5}$ths of the requisite quantity of thin dhoi to be added, and will allow the contents of the vat to soak for three or four hours. Two men will then enter the vat, and by treading and hand rubbing will mix up the entire contents so as to ensure complete amalgamation. When the contents are thoroughly mixed up, they will be strained through metal strainers into a receiving vat, all gritty matter and what will not pass through the holes, which are $\frac{1}{8}$th of an inch in diameter, being removed from the strainers by a cooly told off to each. This will again be broken up with a portion of the thin dhoi kept in reserve and passed through the strainers.

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* Classes (*i*) and (*ii*) will be passed into the lewakhana from the malkhana; class (*ii*) having been there stored, in the first instance, in the lewa opium vat; classes (*v*) and (*vi*) will be passed into the lewakhana direct from the laboratory or parakh ground, as the case may be, after examination by the Opium Examiner.

† If there is any balance of old lewa from the preceding year's manufacture, it will be distributed equally over all the lewa in the several vats prepared before the commencement of caking.

200. After all the lewa has been passed through the strainers, the contents of the receiving vat will be stirred periodically, until it is brought into use, in order to ensure complete mixing, and uniformity in consistence throughout the vat.* The Assistant in charge of the lewakhana will also send, on the morning after a receiving vat has been filled, specimens from it, with the lewakhana assay register, to the laboratory to ascertain the consistence to which the vat has attained and whether any more thin dhoi should be added.

201. In sending specimens from the lewakhana for assay the contents will first be well stirred, samples will then be drawn from four or five places in each vat, by means of a metal test tube of sufficient length to reach from the top to the bottom of the vat. The test tube must be slowly lowered into the lewa, so as to include a vertical section of the whole depth. The four or five samples drawn from the vat will be thoroughly mixed together, and a specimen (about half a seer) of the mixture will be sent for assay, with the assay register. The Assistant Opium Examiner will enter the results of assay in columns 4 and 5 of the register and will return it to the Assistant.

202. When lewa is required for the manufacture of provision cakes, samples of the two receiving vats which contain the oldest lewa will be sent to the laboratory on the afternoon of the day previous to the lewa being required. In addition to the entries that will be made in the lewakhana assay register, the Assistant Opium Examiner will issue a "Lewa Assay Certificate" (Factory Form No. 57) for the vat which gives results between 52° and 53° and nearest to 52·50°. This certificate will be submitted to the Factory Superintendent for his initials before lewa is issued for manufacture, and will be prominently hung up over the vat of which it represents the assay, until the next day's certificate is issued, and will then be taken down and filed for reference. Should neither specimen be within the standard limits, the Assistant Opium Examiner will at once report the matter to the Factory Superintendent, who will take measures to rectify the error, by adding to the vats thin dhoi, or opium broken down in lewa, as the circumstances of the case may require. If, however, the instructions for the preparation of lewa are carefully observed, such errors should hardly ever occur.

203. The full quantity of lewa of the Factory standard consistence allowed for each provision cake is, at the Ghazipur Factory, 5 chittacks. Of this quantity, 4½ chittacks will be used at the time of caking, and the remaining ½ chittack at time of sattai.†

204. Previous to the issue of the lewa, the Lewakhana Assistant will receive from the Assistant Factory Superintendent an indent (Factory Form No. 58) countersigned by the Factory Superintendent for the quantity of lewa required, calculated at 4½ chittacks per cake, on the total number of cakes to be manufactured on that day, plus an excess quantity for adhesion not exceeding 4 per cent., to be shown separately in the column provided for the purpose. The

* The form of stirer at present in use is a wooden board about 20 inches long by 1 foot in width, perforated with holes of two inches in diameter. To it is attached a long bamboo handle by means of which it may be drawn backwards and forwards through the lewa.

† Besides its ordinary ½ chittack, each cake will at sattai also receive an additional fractional quantity of lewa calculated on the amount of lewa recovered during manufacture from the washings of the cake-maker's trays and vessels, minus any excess issues which the account s at the end of manufacture may show to have been made.

lewa for caking will be issued from the lewakhana in vessels of uniform weight, each holding 20 seers of lewa, and the Assistant in charge will apportion off in multiples of 20 seers the number of buckets of lewa that should be placed in each cistern in the caking room. He will then furnish the server at each cistern with the requisite number of tin tickets numbered to correspond with the number borne by his particular cistern, each ticket representing a bucketful (20 seers) of lewa. He will also provide one carrier from the lewakhana to each cistern with a distinguishing ticket numbered similarly to the cistern. Each carrier will then bring a ticket from his particular cistern to the lewakhana, get a bucketful of lewa, drop his ticket into a box as he passes out, and he will be tallied at the same time by the Assistant seated at the entrance before whom the lewa will be weighed. As the carrier empties his bucket into the cistern, he will take another ticket for a fresh bucketful, until all the lewa required for the day is served out.

205. At the close of the serving the Assistant will compare his tallying with the number of the tickets in the box, and will satisfy himself that the full number of buckets corresponding to the tickets issued by him have passed out. He will then debit the total amount issued in his stock book of lewa (Factory Form No. 59). At the end of the day's caking the Lewakhana Assistant will see all the cisterns in the caking room carefully scraped out, and he will have the unexpended balance of the lewa representing the excess issued for adhesion weighed back in his presence into the lewakhana. He will then credit the amount thus received at 52·50° consistence, in column 5 of his stock book of material for lewa manufacture, and this will be transferred to the stock book of lewa with the day's manufactured lewa in the usual manner.

The issue of lewa for sattai and repairs will be conducted in the same way as for caking.

206. At the close of the day the Assistant in charge will also write up the several columns of his stock book of material for lewa manufacture, entering the quantities (gross weight and at 52·50°) of opium, pussewah, washings, &c., actually received into the lewakhana, the consistences of the gross quantities of opium from the malkhana and laboratory being furnished to him by the supplying officers in the memorandum of export and assay and contraband register respectively, which will be initialled by the Lewakhana Assistant and returned. He will then strike off from stock the quantities of each description of material actually expended in the manufacture of lewa, striking a total of them in column 10 of the register. The figures at 52 50° so struck off as expended, which represents the quantity of lewa made, will then be transferred to the stock book of lewa, column 3, as the quantity of prepared lewa actually brought on stock.

CHAPTER VI.

MANUFACTURE AND CARE OF PROVISION OPIUM.

SECTION I.

Export and alligation.

207. The Assistant Factory Superintendent is the officer to whom the Factory Superintendent will entrust the very responsible duties connected with the manufacture and care of the provision opium of the Factory. The Assistant Factory Superintendent will give his unremitting attention to all details, and will carry out the orders of the Factory Superintendent in connection with these duties in a zealous and intelligent manner. The Factory Superintendent is in no way, however, relieved of the responsibility for the work in connection with the manufacture and care of cakes. He should therefore carefully control the work of the Assistant Factory Superintendent in all his departments.

208. On the day before that fixed for the export of opium for alligation, the Assistant Factory Superintendent will take samples for assay from as many vats as he thinks necessary to enable him to obtain a mixture of the required consistence. Three samples will be drawn from each vat selected, the samples being taken from the part of the vat from which the opium is to be removed. The samples will be drawn by means of a test-rod of sufficient length to include a section of the opium from its surface to a depth of about 3 feet. The three samples of opium from each vat will be well mixed together by hand, and three specimens will be taken from the mixture and placed on a patri bearing the distinguishing letter of the vat.

209. The Assistant Factory Superintendent will now fill in columns 1 and 2 of the "Memorandum of export and assay" (Factory Form No. 60). He will forward this memorandum, with the patris, to the Assistant Opium Examiner in the laboratory in a locked box of which that officer will hold a duplicate key. The Assistant Opium Examiner will weigh off and assay three samples of 100 grains from each patri, recording the results and the average of the three assays in the columns of the memorandum provided for the purpose. He will then sign the memorandum and return it to the Assistant Factory Superintendent.

210. The Assistant Factory Superintendent will then calculate and enter in the memorandum the quantity of opium to be taken from each vat in multiples of maunds 50, so as to bring the average consistence of the whole to such a figure as, under the existing conditions of the atmosphere, will give, on the next day but one, the caking standard of the Factory. He will then submit the memorandum for the orders of the Factory Superintendent, who, if he approves of the alligation, will

countersign the memorandum and return it. The Assistant Factory Superintendent will then give orders (in Factory Form No. 61) for the printing of the requisite number of tickets (Factory Form No. 62) for* each vat from which export is to be made.

211. The tickets, after they have been printed, will be ranged consecutively on wire files in bundles of 100 or 200 (according as the tickets are meant to represent 20 or 10 seers of opium each), each bundle representing 50 maunds of opium in the aggregate. These files of tickets and the Assistant Factory Superintendent's order for their printing will be made over by the Head Clerk of the Factory Superintendent's office, on the same evening, to the malkhana sirdar, who will himself check the vat letters of the tickets with the printing order, and have them ready for the export assistant the next morning.

212. On the day fixed for alligation the Assistant Factory Superintendent will cause to be placed, at the exit from the malkhana into the alligation room, a table and one or more sets of scales and weights. Shortly before the time fixed for beginning work the export assistant will seat himself at the table, and will examine the tickets, compare the quantities represented by them with the corresponding letters and quantities shown in the "Memorandum of export and assay," and he will also satisfy himself that the tickets are complete in number. He will then make over the tickets to the weighmen at the vats.

213. Before commencing work the export assistant will also note the number of alligation vats that have to be filled, and he will so distribute his coolies and arrange the work that all the alligation vats at the completion of export may contain opium, as nearly as possible, in equal quantities and of uniform consistence. The following procedure is laid down for his guidance:—

(*i*) He will tell off to each export scale, in the malkhana, coolies either corresponding exactly in number to the number of the alligation vats, or a multiple of that number; and the coolies of each scale will be equally distributed between the alligation vats.

(*ii*) Each alligation vat will be distinguished by a colour, which will be prominently shown against the wall just above it; and a ticket of the colour corresponding to the colour borne by each alligation vat will be worn by the coolies belonging to that vat.

(*iii*) One cooly mate will be told off to each alligation vat to see that the coolies bringing opium to that vat are wearing tickets corresponding in colour to the distinguishing colour of the vat.

214. At each exporting vat will be placed a set of scales and weights, with the file of tickets belonging to the particular vat. As each quantity of opium is weighed off, the topmost ticket of the file will be given by the weighman to the cooly, who will carry the tagar

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* Each ticket will represent 20 or 10 seers according to the class of coolies (men or women) employed.

of opium for check weighment to the Assistant's scale. If found correct the Assistant will note that it bears the next consecutive number to the ticket before it with the same vat letter, he will date and initial the ticket (by means of a stamp), and will string it on to the wire file bearing the corresponding vat letter. The cooly will then pass with the opium into the alligation room.

215. The whole quantity required for alligation (and also for lewa* and abkari) having been thus passed out, the export assistant will prepare an abstract of the day's work (Factory Form No. 63), showing also in it the number of tagars used in exporting the opium on each account, and will submit it in duplicate, together with the memorandum of export and assay, to the Assistant Factory Superintendent, who will check and initial the papers, and will write up the entries in his "Malkhana register" (Factory Form No. 64) for exports for lewa and abkari, and in his "Caking results register" (Factory Form No. 65) for exports for caking. The papers will then be submitted by that officer for the inspection and signature of the Factory Superintendent, in whose office they will remain for compiling "Factory stock account," No. 4, and the duplicate copy of the abstract will be forwarded to the Audit Office, to be there used for the audit of the Assistant Factory Superintendent's books, and the Factory stock account, and for writing up the expenditure side of the malkhana stock book.

216. The opium when it reaches the alligation room will be thrown into the vats in the manner laid down above, the vats being filled simultaneously; and while the vats are being filled the opium will be raked across by two or more coolies in each vat, with wooden rakes. This process will continue until the vat has received its full complement, when the mixing of the opium will be completed by treading, two or more coolies being employed in each vat for that purpose.

217. When the mixing of the opium has been completed as above, the contents of each alligation vat will, on the afternoon of the same day, be equally distributed between the different caking vats, where the mixture will be again trodden by coolies early on the following morning for one and a half or two hours. The Assistant Factory Superintendent will then draw specimens for assay from at least ten places in each vat. He will cause the samples from each vat to be thoroughly mixed in a tagar, and will send two specimens from each tagar to the laboratory for assay. Should the Assistant Opium Examiner find the opium in all the vats to be at the caking standard of the day, he will issue an assay certificate (Factory Form No. 66) to the Assistant Factory Superintendent, who will stop further treading and will forward the certificate to the Factory Superintendent for orders to cake.† Should the Assistant Opium Examiner find the opium of any vat not to be within the standard

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* Export of opium for lewa and abkari will be made from the malkhana in a similar manner.

† The assay certificate will show the consistence of each separate sample, the average for each vat, and the mean average of all the caking vats; the latter average will be recorded as the caking consistence for the day.

limits, he will report the matter in writing to the Assistant Factory Superintendent, who will bring it to the notice of the Factory Superintendent, and the latter officer will take immediate measures to bring the opium to its proper consistence. Should the consistence be too high, opium of low consistence will be added. Should the consistence be too low, treading will be continued until the proper degree of spissitude is reached; or, if the Factory Superintendent finds it necessary, opium of high consistence will be added.

SECTION II.

Preliminary arrangements for caking.

218. Before caking begins, the Factory Superintendent will appoint as many Factory Assistants (permanent or temporary), to be called Caking-room Assistants, and as many sirdars as he may consider necessary for the service of the caking-room, with reference to the provisions of the rules of this Chapter. The appointment of the rest of the establishment, the entire arrangements of the caking-room, and the distribution of its staff he will entrust to the Assistant Factory Superintendent, who will be assisted by the head sirdar.

219. The Assistant Factory Superintendent will keep a distribution register of the sirdars in which he will enter every morning, or once a week, as he may think fit, the work on which each sirdar is to be employed, and the section to which he is to be attached. He will be careful that no sirdar is kept on the same work or in the same section for more than one week at a time.

220. The caking-room will be divided off into sections, and each section will contain, if possible, not more than 40 cake-makers (viz., 20 in each side of the room). Each half section will be in charge of a supervising sirdar, and over every two sections there will be a Caking-room Assistant.

221. Each section will be separated by a wooden railing from the sections on either side of it, communication between one section and another being by means of a wicket through which the cake-makers and their boys will not be allowed to pass. In each section there will be only one door of exit for the cakes, at which an "examining sirdar" will be stationed. In the yard outside the caking-room, where the cakes are laid out during manufacture, there will be stationed two sirdars called "inspecting sirdars."

222. Before caking begins, the Assistant Factory Superintendent will obtain from the store department, on indent duly countersigned by the Factory Superintendent, the entire apparatus required for cake-making, such as scales, weights, moulds, tagars, &c. These will be counted over by the storekeeper to the head sirdar, and will remain during caking time in charge of the Assistant Factory Superintendent. At the close of the season's caking the apparatus will again be counted back into store by the head sirdar, under orders of the Assistant Factory Superintendent, and an acquittance taken from the storekeeper.

223. Scales for weighing out the opium to the cake-makers and cisterns to hold lewa will be arranged in a line down the centre of the caking-room at convenient intervals. In each section there will be three opium scales and two lewa cisterns. At the exit gate of each section will be placed a check scale. Beyond the check scale, at the outer door of the enclosed verandah of the caking-room, there will be on one side of the door a couple of boxes containing fine trash, and on the opposite side of the door a small vat of water.

224. All the seats in the caking-room will be serially numbered, section by section, from 1 to the number of the last seat, and the cake-makers will be told off to the seats in the order in which they appear in the seniority list of cake-makers kept by the Assistant Factory Superintendent, their musters being taken daily soon after the commencement of caking by the head sirdar and an Assistant told off by the Assistant Factory Superintendent. The seats allotted will be retained by the cake-makers throughout the period of caking, vacancies being filled up by the Assistant Factory Superintendent, when necessary, from the seniority list of passed cake-makers who are without seats. When vacancies are thus filled up, the Assistant in charge of the cake maker's musters will note the changes in red ink in the daily list that is used for counting the cakes of the cake-makers.

225. Each cake-maker will be supplied with a wooden seat and a tray with a raised margin to prevent the escape on the floor of any lewa which may happen to be spilled. He will also receive a hemispherical brass cake mould, a tinned iron plate or tile to hold the allowance of opium for each cake, a metal lewa cup, the requisite number of small tickets bearing his number and the date of manufacture, and ready gummed at the back, and a tin vessel, with a perforated bottom (to prevent an accumulation of water), to hold a wetted rag with which to moisten his hands when required. The seat, tray and cake mould will have stamped on them the cake-maker's appropriate number. He will also have a signal board, with his number on it, to mark the position of his cakes laid out in the yard to dry.

226. The preparations for the day's caking will commence early in the morning with the examination and testing of all scales, weights, iron tiles, and export tagars—a duty which will be performed by the head weighman, who will be held responsible throughout the manufacture that the weights of all the above articles are correct, and also for their care and custody. If the head weighman is unable to check all the weights, tagars, &c., before work begins in the morning, he should begin the work of checking in the previous afternoon after the close of the day's caking. This work will be supervised by one of the caking Assistants told off in rotation by the Assistant Factory Superintendent.

227. Each scale at the caking vats will be supplied with a tagar (of the same tare as the rest of the tagars used for conveying opium into the caking-room) as a counterpoise; a weight equal to 14 seers 11 chittacks (the weight representing the opium of 10 cakes), which each tagar will take out; and a counterpoise weight of ½ chittack as an allowance for the moisture and opium adhering to the tagars brought in to be filled with opium.

228. The beams and pans of the scales down the centre of the caking-room will be serially numbered, and the weighman in charge of each scale will be supplied with—

(*a*) a weight equal to 1 seer 7½ chittacks, *i.e.*, the quantity of opium prescribed for the central mass of the cake;
(*b*) a tagar of water;
(*c*) a flat iron plate about 10 inches square;
(*d*) an iron tile for holding the opium for weighment;
(*e*) a counterpoise of the exact weight of the iron tile;
(*f*) a metal or earthenware bowl to hold foreign substances found in the opium.

229. The lewa cisterns will be serially numbered, and the server in charge of each cistern will be provided with a brass ladle which has been specially designed to hold exactly 4½ chittacks of lewa at 52·50° consistence. He will also be furnished with half a dozen spare lewa cups, which he will keep ready filled so as to cause no delay in the work of supplying lewa.

230. The check scales at the section exit doors will be serially numbered with a separate series to that used for the scales for weighing opium in the caking-room. Each weighman at a check scale will be furnished with a 2-seer weight and a 1½-chittack weight.

231. In addition to the establishment already named, the following establishment will be arranged for before caking begins for the season:—

One beldar to each weighman at a scale weighing opium; one boy to each cake-maker; two leaf distributors with baskets to each section; two boys to each trash box; the requisite number of carriers (according to the distance of the scale from the caking vats) to each opium weighing scale in the caking-room for conveying opium to them from the caking vats.

SECTION III.

Control and supervision over caking.

232. The Factory Superintendent will be present in the caking-room, and will inspect the work there during at least an hour daily.

The Assistant Factory Superintendent, who is directly answerable to the Factory Superintendent for everything connected with the manufacture of cakes, will remain present in the caking-room and in the buildings, where any operations connected with caking are being conducted, during the whole time cake-making lasts. He will see that the assistants and sirdars are at their posts and doing their duty. He will observe the manner in which the searching and weighment of the opium, the issue of lewa, and all other details of the work, are being conducted, paying particular attention to the manufacture of the shells and to the supervision of this work by the sectional sirdars. He will from time to time examine the lower halves of shells ready for the reception of opium, and will satisfy himself that they are of the proper thickness

throughout.* He will also daily open out not less than a dozen cakes, preferring (as a check upon their work) those which have been passed by the examining sirdars. The active supervision of the process of cake-making is one of the most important of the Assistant Factory Superintendent's duties.

233. The duties of a Caking-room Assistant are—

(*a*) to maintain proper discipline in his sections;
(*b*) to see that the opium and lewa are carefully weighed out by the section weighmen and the lewa servers;
(*c*) to see that the entire bundle of leaves, the entire mass of opium, and the entire cupful of lewa, are used in making the cake for which they were issued The Assistant should be particularly careful to see that the lewa cups are completely emptied before being sent to be refilled, and that with the beginning of each new shell a fresh cupful is brought into use;
(*d*) to check at least once an hour the number of each of his cake-makers' cakes laid out in the yard;
(*e*) to see that the four supervising and the two examining sirdars employed under him pay strict and careful attention to their duties.

234. The special duty of the supervising sirdar is to keep a close watch over the manual work of his 20 cake-makers. He should see that the leaves of different qualities are used in their proper turn; that the lewa is thoroughly and evenly spread; that the half of the shell in the mould is of the required thickness of $\frac{7}{16}$ths of an inch;† and he should occasionally take to pieces the lower half of the shell, before the cake-maker has put the opium into it, and satisfy himself that the leaves have been properly arranged and that sufficient lewa has been used. He should also see that the opium is carefully placed in the shell in the manner directed, and that the upper part of the shell is tightly and uniformly finished and that all air is expelled. He should also be careful to prevent the cake-makers from plugging up the holes in the bottom of the cups in which their moist rags are kept, so as to collect water with which to dilute their lewa or moisten their leaves.

235. When faults in the cakes are observed by the supervising sirdars, they will be at once reported to the section assistants. If the fault is of a serious nature, the section assistant will enter the cake-maker's name and the offence committed in a fine book kept ready for the purpose on a table in the caking-room, in which the Assistant Factory Superintendent will afterwards enter the fine or other punishment, according to the circumstances of the case. This fine book will be placed once a week before the Factory Superintendent for his approval and initials.

236. The duty of the examining sirdar, stationed at the exit gate of the section, is to see that no faulty shell leaves the caking-room. As each cake passing out of the room is handed to him by the cake-maker's boy, he will observe its shape, whether spherical or

* The lowest point of the shell is that to which attention should be specially directed.
† Cake-makers are apt to make the lower half of the shell thinner than the upper half.

pearlike,* and by turning the cake about in his hands he will ascertain whether it is baggy or lumpy (viz., soft in some places and hard in others); he will observe whether the "chandi" leaf has been smoothly pasted on the outside of the shell without creasing, and whether the margin of the leaf has been securely pasted down. If the examining sirdar finds only slight faults in a cake, he will open out the cake, and will return it to the cake-maker to be remade, but if he finds serious faults he will retain the cake, and report the matter to the section assistant, who will, if necessary, bring it to the notice of the Assistant Factory Superintendent.

237. It is the duty of the two inspecting sirdars† in the yard to keep watch over the cakes as they are laid out to dry by the cake-makers' boys and to cursorily examine them for faults. Cakes with slight faults will be returned by them to the cake-makers; should they notice any badly made, loose, or baggy cakes, they will at once report the matter to the head sirdar, who will, if necessary, report it to the Assistant Factory Superintendent.

238. The following faults in cake-making are serious faults, viz.—

(*a*) omission to use the whole quantity of opium, leaves, and lewa issued for the cake;

(*b*) unequal distribution of the leaves between the different parts of the shell, resulting in undue strength in some places and undue weakness in others;

(*c*) uneven application of lewa to the leaves, resulting in bald patches;‡

(*d*) too scanty use of lewa in the lower half, and too copious use of lewa in the upper half, of the shell, or *vice versâ*;

(*e*) the enclosure of air in the cake, either between the shell and the opium, or between the different layers of the shell;

(*f*) the use of water by the cake-maker at any stage of his work, by squeezing his wet rag over the cake or into his hands, instead of simply moistening his hands with it.

SECTION IV.

Manufacture of cakes.

239. The caking vat and lewa assay certificates having been passed by the Factory Superintendent, and the importation of lewa into the caking-room cisterns having been completed, the actual work of cake-making will begin.

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* A pear-shaped cake is generally a bad cake. A shell spherical in shape, neither baggy nor lumpy, resisting pressure evenly at every part of its surface, may be considered *primâ facie* a good shell; but even such should be occasionally opened to make sure that the lewa has been properly spread. Shells should not always be opened from the side last made, but should be as often opened from the side which was made in the mould, as the work on this side is sometimes imperfect.

† A watchman will also be temporarily employed for each section in the yard, to keep watch over the "jettas," and to prevent any person touching the cakes without proper authority or moving them from one jetta to another.

‡ A cake thus made is technically known as a "dry cake."

240. The first bell will ring at 15 minutes before the hour* appointed for commencing caking, when the cake-makers, their boys, and all the caking-room employés will take their places. This bell will also be the signal for opium being taken out of the caking vats. The opium as it is taken out of the vats will be put into large iron tagars, in which it will be well searched by hand by a staff of coolies for foreign substances. It will then be placed in tared tin tagars, and each carrier will have his tagar accurately weighed at the caking vat scale, each load of opium being 14 seers 11 chittacks, the equivalent of 10 cakes.

241. The second bell will ring at 5 minutes before the appointed hour. This bell will be the signal for the carriers, who have each been furnished with a tin ticket by the weighman, on his opium being weighed, to pass out of the caking-vat room to their several scales with their loads, and as each passes out of the gate he will drop his tin ticket into a box kept by a mate cooly.

242. The weighmen at the scales in the caking-room will then proceed to weigh out the opium accurately into parcels† of 1 seer 7½ chittacks, representing the contents of one cake. Each weighman will be assisted by his beldar, who will first take out a lump of about the required quantity, and will place it on the iron plate in front of him and search it; the opium will then be placed on the iron tile at the scale which has been slightly wetted to prevent the opium adhering. By adding or removing a small quantity the exact weight will be obtained by the weighman, and the opium will then be transferred from the iron tile to the tile brought by the cake-maker's boy, which has been previously dipped in the tagar and the water drained off. The lewa servers will also at the second bell distribute the exact quantity of lewa into each cup brought by the boys, and will have their spare cups always full. And at the same time the leaf distributors will give a bundle of leaf to each cake-maker, which the cake-maker and his boy will proceed to sort and have ready.

243. At the third bell, which will ring punctually by order of the Assistant Factory Superintendent at the hour appointed, the day's cake-making will begin throughout the room.

244. The quantities of the different materials used for each cake are as follows:—

Opium at the standard consistence	1	7·5
Lewa at 52·50°	0	4·5
Flower-leaves (unwetted)	0	5
Water (used in wetting the leaves), taken at ...	0	·5
Trash (into which the cake is dipped at the door of the caking-room), taken at	0	·25
Total ...	2	1·75

245. The first material with which the cake-maker has to deal is his bundle of leaves. From this he will take out a sound, whole

* Usually 7 A.M.

† Whenever the caking consistence is one or more degrees below the Factory standard an addition to the weight mentioned in the text will be made for each cake at the rate of 1½ katchas for each degree by which the opium falls short of the standard.

leaf of the first class. Having moistened the interior of his brass mould with his wet rag, and in addition smeared it over with as much lewa as he can take up with the tips of two fingers, in order to prevent the leaf adhering to the mould, he will tear the leaf across to its centre, and spread it evenly in the mould, pasting down the over-lapping pieces with lewa. He will then tear the edge of the leaf in three or four other places, so that it may take in the shape of the mould without creasing, and will paste down the torn corners with lewa. This first leaf should just fill the entire mould. This is the first stage in cake-making.

246. He will next take some first-class leaves which he will tear in two,† and paste the semicircular halves overlaping each other, vertically round the "chandi" leaf with lewa, taking care that the lower corners of the leaves are so placed as to reach well over the centre of the bottom of the mould.‡

The upper portions of these leaves will be left hanging over the outside of the mould to form the upper half of the shell. This layer of leaves is called by the cake-maker "sanjap" or lining. Having completed the circle of the mould in this manner, he will next paste with lewa crosswise inside the "sanjap" other halves of two first-class leaves, called "chits," so as to give lateral strength to the shell.§ Then, holding with his open left hand the inside of the mould, and turning it round and round on its base, with a twisting motion of his right wrist, he will firmly press the "chits" and other leaves together with his right fist. This operation is called "bhanga." This completes the second stage in cake-making.

247. He will then tear several second-class leaves into two or three pieces each and paste them with lewa overlapping each other, vertically in the mould, leaving the upper portions hanging outside, as was done with the "sanjap" layer. This layer is technically known as "dawan" or skirt. Inside it he will place other "chits" of second-class leaves well smeared with lewa, and will repeat the process of "bhanga."‖ This completes the third stage in cake-making.

248. He will then take some third-class leaves, and tearing each of them into three or four pieces will paste with lewa the pieces slantwise round the mould as in the case of the "sanjap" and "dawan" layers. The third-class leaves so placed are called by the cake-makers "gata," a close fitting dress. He will place other "chits" of third class¶ leaves, smeared with lewa, inside the "gata," and for a third time press the whole together with his right fist. The exposed surface of the last

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* The cake-makers call this leaf "chandi." But as a fact the whole of the "chandi" leaves properly so called are reserved for sattai, for which the quantity delivered each year is barely sufficient. The leaf referred to in the text is the finest leaf in the cake-maker's bundle, and, strictly speaking, is not a "chandi" leaf.

† Should the leaves be large, each leaf may be torn into three pieces. Some 10 or 12 pieces will be required to go round the mould.

‡ This precaution is needed to ensure the shell being of a proper thickness and strength at this particular spot.

§ The second of these two leaves, instead of being torn into two and used as a "chit," may be torn across to its centre only, and be then fitted over the first "chit" in the same manner as the first leaf of al was laid in the mould. This leaf thus placed is technically known as dabao.'

‖ One of these leaves may also be placed as a 'dabao.'

¶ Ditto ditto ditto.

chit, which will come in contact with the opium, will not be smeared with lewa, nor up to this stage will the portions of "sanjap," "dawan," and "gata" leaves left hanging over the mould. This completes the fourth stage in cake-making; and the lower half of the shell, which, if properly made, will in no place be less than $\frac{7}{16}$ths of an inch in thickness, is now ready to receive the opium.*

249. The cake-maker will then moisten his hands with his wet rag, and being careful to remove the whole, will take the opium from his plate, and holding it up in both hands will let it fall gently,† in an ovoid shape, into the half shell ready for its reception. He will then coax it upwards with one hand, so as to prevent it spreading over the edge of the mould, while with the other hand he will take up the overhanging "gata" pieces, one by one, and apply them to the surface of the opium, taking care to smear the leaves with lewa where they overlap each other. He will then smear the outside surface of the gata with more lewa, and will proceed to fit the cake with its "kumberbund" or girdle. This he will do by tearing some three or four third-class leaves in half, and applying them laterally round the 'gata,' tucking the lower edges well down below the margin of the mould, between the "gata" and the "dawan;" and, at the same time, turning the mould round on its base, and clasping the cake with both hands, he will press the 'kumberbund' tightly round it, thus, causing the opium enclosed in the "gata" to take a conical shape. He will continue to turn the mould round, compressing the cake with his outspread fingers, partially interlocked so as to exclude all air while at the same time he will tuck the summit of the cone of opium inside the "gata" covering with his two thumbs, taking care not to invert the edges of the gata while doing this, and will bring together the edges of the leaves so as to close the opening at the top of the cake as far as possible. He will now paste, with lewa, halves of third or second-class leaves crosswise over the top of the cake, tucking the lower edges with his fingers well into the mould. This completes the fifth stage of cake-making.

250. The cake-maker will now pull up the "dawan" layer, piece by piece, and paste, with lewa, each piece over the cross leaves with one hand, while with the other he firmly holds together the portion of the shell already formed. He will then paste over the top the two halves of a "dawan" leaf placed crosswise and will pull up the "sanjap" leaves and paste them down, piece by piece, with lewa. Then, with his thumb and fingers interlocked, he will press the upper half of the cake on all sides equally, so as to make it as spherical as possible. He will finish off the top of the shell with odd pieces of leaf, placing over all a (so-called) "chandi" leaf after tearing the margin here and there in order to make it fit the shell without wrinkling. The cake is now complete, and the cake-maker will tilt it out of its mould by a gentle knock on his tray with the edge of the mould, and he will rub over the cake any small quantity of lewa he may have left,

* All leaves, or portions of leaves, must at the different steps up to this point, with the exceptions above noted, be well spread with lewa. The Assistant Factory Superintendent's special attention will be directed to this, as cake-makers are apt to use their lewa too sparingly in making the bottom half of the shell.

† The practice of taking up the opium with one hand and "flopping" it into the shell must be strictly forbidden, as it is certain to result in air cavities being left in the cake.

and, having smoothed down any rough edges there may be of the two "chandi" leaves, he will hand the cake to his boy, who will gum one of the tickets bearing his cake-maker's number, to the centre of its lower hemisphere.

251. The cake-maker's boy will then present the cake for examination to the examining sirdar at the exit door of the section. If the sirdar passes the cake, the boy will place it gently on the check scale, and if it turns the scale at the prescribed weight, he will be allowed by the weighman to take it to the trash box and will place it, upper half downwards and the portion with the ticket upwards, in the box in front of the boy in charge. The latter will cover a little more than half the cake, as it rests in the box with trash; he will then place the cake, the portion covered with trash downwards, in an earthenware cup, which he will take from a stack placed within his reach by the side of the box. Meanwhile the cake-maker's boy will wash his hands in the water vat on the opposite side of the door. Having done this, he will return to the trash box, take his cake in its cup from the boy in charge of the box, carry it into the yard, and place it on the ground opposite his cake-maker's signal board.* He will then return to the caking-room to attend to the wants of his cake-maker.

252. The prescribed weight at which a cake should be passed by the check scale at the section exit doors on the day of manufacture is 2*s.* 1½*ch.*, representing the total of the materials which go to make up a cake. As a rule, the cake will be found to be slightly in excess of this weight owing to the moisture used in handling the opium while the cake is being made, and to the slight under-estimation of moisture taken up by the leaves when wetted. When compensation has to be made on account of the presence of atmospheric moisture in the leaves, or on account of the caking consistence of the opium falling below standard, the additional weight allowed to each cake will be added to the above test weight. That it is so added is a point to which the attention of the Assistant Factory Superintendent should be particularly directed.

253. When a cake is found at the test scale to be short in weight, the weighman will detain the cake and send for the section assistant, who will take all necessary action. In cases of deficiency in weight (such deficiencies should rarely occur), the fault will generally be found to lie in the quantity of leaves used, pieces of leaves being sometimes broken off by accident from the bundles; it is rarely that the weight of opium can be at fault owing to the double check on it. When such deficiencies are found, not exceeding a chittack, the section assistant will have the deficiency made up with extra leaf and lewa after satisfying himself from an inspection of the cake-maker's lewa cup, tray, &c., that nothing has been kept back. If the deficiency exceeds a chittack, the matter will be brought to the notice of the Assistant Factory Superintendent, who will, in his presence, have the cake opened up and the opium separated and weighed to ascertain where the deficiency lies. If it is in the opium, he will bring the matter to the notice of the Factory Superintendent.

254. While the caking lasts a bell will be rung every 20 minutes to mark the time. At the full hour the bell will be rung twice.

* Each cake-maker's lot of cakes (called a 'jotta') will be laid out by his boy in rows of five

During each interval of 20 minutes, no cake-maker will be allowed to turn out more than five cakes. At least once an hour, the work of the cake-makers of each section will be checked by the Caking-room Assistant in charge of the section, who will go out into the yard and there count each man's cakes.* A man found to be making his cakes too fast will have his work stopped, or will be otherwise punished. The Assistant Factory Superintendent will also periodically during the day walk round the yard and examine carefully, jetta by jetta, and satisfy himself that the cakes are being properly made.

255. Within the above general limit the number of cakes which each man turns out will depend on his individual proficiency. The Assistant Factory Superintendent, will, however, reduce the above limit in a case where a cake-maker is not working satisfactorily; and if after the number of cakes for every 20 minutes has been reduced to 3 and the man still fails to give satisfaction, he should be removed from his seat, and punished either by being suspended for a period from his duties or sent back to the school at the discretion of the Assistant Factory Superintendent. A man who has been passed out of the school a second time and still fails to give satisfaction should be permanently removed from the list of cake-makers.

256. As soon as the day's caking is over, the permanent Assistant in the caking department will, accompanied by the head sirdar, carefully inspect the whole of the cakes laid out to dry. All faulty cakes will be taken out by him, they will be marked with a blue ticket, close to the cake-maker's ticket, and will be set in front of the jetta to which they belong, and the Assistant will show the number of such faulty cakes against the cake-maker's number under the proper date in the register of faulty cakes (Factory Form No. 67). Simultaneously with the above examination another Assistant from the caking department, told off by the Assistant Factory Superintendent, will, in company with another sirdar, count each cake-maker's jetta, and will enter the number made by each against his number and name in the register (Factory Form No. 68), the sirdar making similar entries in a vernacular copy of the same register. The totals of the English and vernacular lists will be compared at the end of the day, and the entries will be posted daily in detail in the monthly register of cakes made by each cake-maker (Factory Form No. 69).

257. While this examination is proceeding, the cake-makers and their boys will wash their hands, trays and vessels in the water vats at the verandah doors, and the caking-room will be cleaned out ready for next day's work. All the washings of the seats, trays, &c., will then be carefully collected under the supervision of the Lewakhana Assistant in the vat in the dhoikhana set apart for it.

SECTION V.

Storage of cakes after manufacture.

258. When the examination and counting of the cakes is finished, the cakes lying in the yard will be barrowed by the cake-makers' boys

* As the cakes are laid out in lines of five, each line represents the limit of 20 minutes' work, and every three lines that of one hour.

(the boys of two adjacent cake-makers working jointly for their two masters) to the open yard to the north of the caking-room, where they will be laid out by a special staff of coolies in blocks of 500 or 1,000 as may be found most convenient, in compartments already marked out on the floor. When the entire number has been so arranged in blocks, the Assistant who has already counted the cakes in jettas will, in company with the Assistant of the godown into whose charge the cakes will pass, tally his previous counting with the number now obtained, and will obtain, to the exact number of cakes on his list, the signature of the godown Assistant, who then becomes responsible for their charge.

259. After the counting by both Assistants is completed, the list with their signatures will be submitted to the Assistant Factory Superintendent, who will, after inspection, enter against the receiving godown in his receipt book of cakes (Factory Form No. 70) the actual number of cakes obtained and the caking vat consistence of the day. The receipt book will then be sent for the signature of the Assistant in charge of the receiving godown for his acknowledgment that the full number of cakes have been received by him for storage in his godown. In inspecting the list of cakes counted in, the Assistant Factory Superintendent should tally the number, with the number of tin tickets, each representing 10 cakes, passed out of the caking vat room during manufacture. The number of cakes manufactured should therefore always be a multiple of 10, the small amount of opium remaining after manufacture (generally representing the scrapings of the vats) being thrown into the vats under preparation for the next day's manufacture. The Assistant Factory Superintendent having satisfied himself of the actual number of cakes manufactured, will now write up columns 7 to 17 of his register of caking results, and the general register of cakes (Factory Form No. 71).

260. The cakes will be allowed to remain in the yard exposed to the sun until about 2 P.M., when they will be barrowed off to the receiving godown by a special staff of coolies, under the supervision of the godown Assistant. As each cake is placed on the barrow it will be turned in its cup so as to expose the lower half of the cake. This turning will not be done with the hand, but by an inverted cup being placed over the cake, and the cake being turned into it as the inverted cup is placed on the barrow. As the cakes are being barrowed in, a double tally will be kept, one tally of the barrows being kept close to the drying yard, another at the doors of the receiving godown by one of the godown sirdars.* After the completion of the work the two tallies should be compared with each other, and with the list of cakes counted previously, for the satisfaction of the godown Assistant. A report of the tallies should be made the same evening to the Assistant Factory Superintendent.

261. The faulty cakes will be removed last, and the next morning will be laid out for the examination of the Assistant Factory Superintendent, who will note the cake-makers on the list against whose names they appear, and whether any punishment should be inflicted on them. He will also cut open at least 15 of these cakes to examine them more carefully, and to ascertain and point out to the cake-makers the exact nature

* The barrows are constructed to hold 15 cakes each.

of their defects; a similar number will also be cut open by the Factory Superintendent. These faulty cakes will then be opened up and remade by special cake-makers under the supervision of the Assistant in charge of the cake godown in which they are lodged, who will show them in his godown register as repaired cakes.

262. On the morning after the cakes have been received into a godown, the Assistant in charge will select 100 of them at random. These he will have weighed in his presence singly, and the weights recorded in a register (Factory Form No. 72). He will then bring out at the foot of the register the maximum and minimum weights recorded, and also the average weight of the day, and will sign and submit the register to the Assistant Factory Superintendent, who will examine and sign the record and submit it for the information and initials of the Factory Superintendent.

263. The cakes, after having been tallied into the cake godown in the manner described in Rule 260 above, will be placed on the racks in their cups. The racks in each godown will be numbered consecutively, and each block will contain a certain fixed number of cakes. On the block will be affixed a slip (Factory Form No. 73) showing the number of cakes in the block. Two permanent sirdars will be told off to each godown, one of whom will be the head sirdar of the godown and will be answerable for the musters of the coolies employed and the general control, while the work of supervision over the daily work will be divided off by the Assistant in charge between the two sirdars.

264. From the time the cakes enter the godowns until they are packed they must be constantly turned in their cups in order to preserve uniformity in their shape, and to allow the shell to dry evenly,* and all the cakes on each block of racks must be turned in rotation every fourth day. By "turning" is meant that the cakes will be brought down from their racks to the floor, where they will be removed from their cups, spun round by the boys in both hands, so as to lightly hand-rub them, and be replaced in their cups, which will first be wiped out with a piece of cloth. During damp weather, when the cakes and cups get mildewed, they will be rubbed with trash to take off the mildew.

265. Before the cakes are put up again they will be examined by the Assistant in company with the sirdars, who will examine the blocks that have been emptied, and satisfy themselves that all the cakes on them have been brought down and properly cared for. The Assistant will write up the slip affixed to the block and will initial it. The boys will then proceed to put up the cakes again, and in doing this will so arrange that the cakes that were before on the lower racks will now be put on the upper tiers, and those that were on the upper tiers will be put in the lower. The object of this is to promote uniformity of dryage, as cakes in the upper racks, being nearer the roof, are apt to dry more quickly.

266. The boys employed in the work of turning the cakes will place on one side all cakes which show signs of injury by grubs, black mould, leakage, &c., or which appear to need repairs. These cakes

* When holidays intervene, arrangements should be made for the turning of cakes every other day, so that cake godowns are not kept closed for two consecutive days.

will be examined by the Assistant in charge of the godown, who, if he considers repairs to be necessary, will take the orders of the Assistant Factory Superintendent regarding them.

267. All requirements for lewa and leaves for petty repairs, and for cups and trash for the use of a cake godown will be indented for by the Assistant in charge through the Assistant Factory Superintendent and Factory Superintendent. The Assistant in charge will keep a daily record of these receipts, as well as a record of the cakes received into the godown, the cakes turned, the number repaired or damaged, and all other details connected with his charge in his godown register (Factory Form No. 74), which will be submitted weekly for the inspection and initials of the Assistant Factory Superintendent. This register will also be submitted weekly for the inspection and initials of the Factory Superintendent unless that officer inspects it periodically during his rounds.

SECTION VI.

Sattai of cakes.

268. The operation of sattai includes the systematic overhauling of all the cakes of the season for such repairs as may be necessary, and for giving them their finishing touch with the leaf and lewa still remaining to complete the weight of materials allowed to each cake. This operation will be undertaken when the shells of the earliest manufactured cakes have sufficiently hardened to the touch, which will usually be about the first or second week in August. The order appointing the date for sattai will be published by the Factory Superintendent in the Factory order-book, when the Assistant Factory Superintendent will make all necessary arrangements.

269. The work of sattai will be under the immediate and effective supervision of the Assistant Factory Superintendent, under whom will be placed one permanent and one (or two) temporary Assistants told off for the work by the Factory Superintendent. There will be one supervising sirdar to every 20 cake-makers, and the number of cake-makers will be regulated by the number of cakes to be sattaied daily. Ordinarily about 20,000 cakes will be sattaied daily with 200 cake-makers. To every two cake-makers there will be one boy. The work will be carried on as far as possible in the caking-room, which will be divided off into sections corresponding to the number of assistants available. Each cake-maker will be supplied with the same apparatus as at cake-making.

270. The cakes will be sattaied, as far as possible, in the order of their manufacture, beginning with those which were first made. For convenience in working, where a small godown cannot without difficulty issue and receive back 20,000 cakes daily, the Factory Superintendent may at his discretion direct the simultaneous sattai of the cakes of two such godowns which were manufactured simultaneously or in consecutive order. In such cases every precaution will be taken by the Assistant Factory Superintendent to prevent the cakes of the two godowns getting mixed, each godown being restricted to particular sections in the

caking-room, and the sections representing each godown being railed off with sufficient space between them.

271. All cakes which require tightening (kassai) or repairing will be separated by the godown sirdars from the good cakes. These cakes will be marked with chalk, and after inspection by the Assistant Factory Superintendent will be made over to specially selected cake-makers, who will be seated at one end of the caking-room or section.

272. At the Ghazipur Factory 2·25 kutchas of chandi and sattai leaves will be allowed for the sattai of each cake, in addition to any compensation on account of the presence of atmospheric moisture in the leaves (*vide* Rule 43, Chapter II). The allowance of lewa will be half a chi tack per cake at 52·50° consistence, besides any additional fractional quantity made up of the recoveries from the cake-makers' trays and vessels, and deficiency in expenditure shown by the books during manufacture. This fractional allowance will be calculated and apportioned by the Assistant Factory Superintendent before the commencement of sattai, and the Factory Superintendent's orders taken thereon.

273. The cakes will be sattaied thus. Having moistened the mould with his damp cloth, the cake-maker will place in it the cake. He will rub lewa well into the upper surface so as to penetrate every crevice. He will then fill up any indentations, or uneven surfaces, with small pieces of leaf, covering each piece with lewa so as to make the upper surface even. Over all this he will tightly spread one or more pieces of sattai leaves, tearing them of the required size and at the margin wherever necessary to enable them to adapt themselves to the shape of the cake. He will then reverse the cake in the mould, and proceed to sattai the other half in a similar manner, spreading over this half one of his chandi leaves. He will then place the cake on its side in the mould and will cover over the portion, where the leaves of the upper and lower sattai meet, with one or more long strips of chandi or sattai leaf, smeared with lewa and smoothed down. He will then turn the cake right over again in its mould, and do the same to the reverse side. The sattai of the cake is then complete, and he will tilt it out of the brass mould.

274. The cake-maker will then place the cake in a tagar of trash by his side, the surface with the whole chandi leaf being uppermost, and will give it one or two circular turns, so that trash will be applied only half way up the cake. He will then place the cake in its cup with the smooth surface uppermost.

275. Cakes marked for tightening will be treated as follows. Should the shell be very loose, the cake-maker will grasp the cake, soft side downwards, in both hands, pressing meanwhile his fingers upwards so as to form an indentation at the soft spot, and to force the opium tightly into the opposite part of the shell. The cake will then be inverted and placed in the mould with the indentation upwards. A cruciform incision, about four inches in length in each direction, will then be made with a sharp knife across the depressed portion until the opium is reached.* The corners formed at the centre of the cross will

* Another method is to stop the incision before it reaches the opium, and to then press the gata layer inwards with the finger so as to form a fold inside the opium. The two walls of the fold are then drawn together, and kept in position by a piece of leaf pasted across them with lewa, over which the corners of the cut layers are fastened, one after the other in the manner indicated in the text.

then be taken up one after another, layer by layer, and turned outwards. The opposite corners of the gata layer will be drawn tightly together over the opium, one pair at a time; over the four overlapping corners a piece of leaf will be pasted with lewa; the next four corners will be brought together and secured with lewa in a similar manner, and a piece of leaf will be fastened over them. The operation will be repeated until all the separate layers of the shell have been disposed of. A sound leaf will then be fastened over the last layer, and the cake will be sattaied in the usual manner. If the cake to be tightened is not very loose, it will be placed in the mould soft side uppermost and the baggy part of the shell will be squeezed upwards so as to form a ridge. This will then be incised lengthwise and across, and the shell will be tightened, and finally sattaied, in the manner described above.

276. Cakes, sattaied, tightened or repaired, will be carried by the boys and placed in jettas against the numbers of the cake-makers in the verandahs or other place set apart for the purpose. The cakes as they stand in the jettas will be counted by a section sirdar, examined carefully by the Assistant in charge of the section, and also by the Assistant Factory Superintendent, when they will be removed in barrows to the cake godown. In issuing cakes from a cake godown the Assistant in charge of the godown will be answerable for the proper tallying out and tallying back of the barrows, and he will also see that in replacing the cakes on the racks they are properly handled, so that the newly sattaied surface is in no way damaged.

277. On each working day during sattai one batch of 40 cakes will be taken at random by the Assistant in charge of the godown from among those to be sattaied, and the cups will be numbered consecutively. The cakes will be inspected by the Assistant Factory Superintendent and weighed singly,* and then sattaied. After sattai the cakes will again be weighed, and the difference between this and the first weighing will give the increase of weight resulting from sattai. This will show whether the cakes are actually receiving the quantity of leaf and lewa prescribed. The same procedure will be followed daily in regard to 40 cakes taken from those set aside for repairs.

278. During sattai there will be kept up under the orders of the Assistant Factory Superintendent a register (Factory Form No. 75) giving full details of the sattai operations, viz., the number of cakes sattaied, repaired or 'kussed;' the amount of lewa and leaves expended; and the average weight of cakes before and after sattai and repairs. A copy of this register will be submitted daily to the Factory Superintendent and by him to the Agent.

279. In order to ascertain the state of the cakes with reference to their ripeness and fitness for packing, the following procedure will be adopted:—A fortnight after the conclusion of sattai, one or two batches of 40 cakes each will be selected in each sirdar's section, so as to represent fairly the condition of the cakes in the various parts of the godown. The cakes in each batch will be serially numbered by tickets from

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* A comparison between the average weight thus obtained and the weight of the cakes as recorded on the date of the receipt of the cakes into the godown (*vide* Rule 262) is useful as an indication of the rate of dryage in the *interim*.

1 to 40. The 40 cakes of each batch will be weighed singly and divided according to their weight into four classes, viz.—

		S. CH. K.
Class I, those weighing	...	... 1 15 0 and under.
		S. CH.
„ II, ditto	...	... 1 15 1 to 2 0
„ III, ditto	...	... 2 0 1 to 2 1
„ IV, ditto	...	... over 2 1

the weight of each cake being entered opposite to its serial number in the proper column of the register (Factory Form No. 76). The entries in each column will be totalled, and the results entered separately for each batch in the abstract at the foot of the form, giving the number and weight of the cakes in each class. The total of all four classes will give the cake weight of a chest if packed from the rack containing the cakes of that particular batch. The total weight of all of the batches, divided by their number, will give the approximate cake weight of a chest for the godown.

280. Once a week the cakes of each batch will be separately weighed, and the results recorded in the above manner, the weighment register being submitted to the Factory Superintendent on each occasion through the Assistant Factory Superintendent. Care must be taken that each batch of 40 cakes is returned to the place in the racks from which it was taken.

281. When the average weight of the cakes of a godown that were first manufactured approaches the normal packing weight, viz.,* about maunds 2-1 per 40 cakes at the Ghazipur Factory, the cakes will be further tested, for ripeness, by handling. A cake which, after firm continuous pressure by the palms and fingers of both hands, gives a uniform unchanging sensation of cold, is not yet matured or ready for packing. If, on the other hand, the sensation conveyed is one of warmth, the cake may be considered fit for packing. The Factory Superintendent will take into consideration both the weight of the cakes and their fitness for packing before he decides on the date packing should begin.

SECTION VII.

Caking School.

282. During cake-making a school will be established at one end of the caking-room. It will be for the purpose of teaching the art of manufacturing, sattaiing and repairing cakes to persons who may be thus fitted to supply vacancies occurring among the cake-makers. The number of persons under training in the school should be about a fifth or a sixth of the total number of proficient cake-makers employed at the factory. The scholars will be recruited from among the promising cake-makers' boys or other lads of superior physique and intelligence

* This is the average approximate weight in a normal season. It will be subject to slight variations in seasons of unusual drought or rainfall.

who may apply for admission. The school will be under the supervision of the Assistant Factory Superintendent, who will make all appointments to it.

283. With the sanction of the Factory Superintendent, the Assistant Factory Superintendent will appoint two permanent sirdars of known proficiency in cake-making to act as instructors; and if the number of scholars exceeds 40, a third sirdar, temporary or permanent, should be appointed as instructor, besides the examining sirdar at the exit gate. The school, like any other section of the caking-room, will be supervised by one of the section assistants. The school hours will be the same as the hours for cake-making, and during this time the pupils will be kept steadily to their work.

284. The Assistant Factory Superintendent will divide the school into sections, and will regulate the number of cakes to be made by the pupils of each section according to proficiency. The maximum number of cakes that a scholar of the first or most proficient section will be permitted to make will be two in every 20 minutes, or 25 in a day, but those who are in the opinion of the Assistant Factory Superintendent fit to fill vacancies among the cake-makers will be permitted by him before being drafted out to work up to 4 cakes in every 20 minutes, or 50 in a day. The Assistant Factory Superintendent will so arrange that the scholars in those sections where sufficient proficiency has not been attained will not be permitted to turn their cakes out of their moulds until they have been examined and passed by one of the instructors.

285. There will be two grades of scholars, the first or proficient grade drawing pay at the rate of Rs. 4-8 a month; the second grade drawing pay at Rs. 4 a month. There should not be more than one-half the total number of scholars in the first grade, all promotions being made to it, after careful inspection of their work, by the Assistant Factory Superintendent.

286. All vacancies in the list of cake-makers will be filled by the Assistant Factory Superintendent from those who have passed through the school and learnt their work to his satisfaction.

Vacancies will not be filled up in any other way.

287. The school will be re-opened at sattai, and the operations of sattai and of petty repairs will then be taught.

SECTION VIII.

Diseases of cakes and injuries to them.

288. The shell of the opium cake is a fragile organic material, and readily susceptible to decay and destruction. From within the ravages of animal life, generated under favourable conditions from ova lying latent in the very leaves of the shell, have to be guarded against, and from without there is the equally destructive vegetable fungoid growth known as black mould. Accidental causes, such as leakage and falls from a height, add a small quota to the injuries to be guarded against.

289. The animal life that has been found to be generated within the shell of an opium cake is commonly known in the department under the name of "grubs" (a species of Anobium). Damage to an opium cake shell from grubs is first noticeable by either a minute circular hole in the surface of the shell or by excreta visible between the leaves of the cake where they overlap. An examination of the cake by gradually following the line of excreta, as the neighbourhood of the suspected part is opened up, will show the ramifications of the grubs, extending, under favourable circumstances, far between the leaves and deep into the shell. The same grubs that attack the cake shells are also found, under favourable circumstances, to attack the leaves stored in the Factory. As they are not found to attack anything else, it is assumed that the leaves of the shell offer a favourable nursing ground to these destructive organisms.

290. The grub has been found to exist and thrive under the following conditions:—

(*i*) continued dampness in the atmosphere;
(*ii*) dampness arising from defective drainage around, or from the roofs of buildings used as cake godowns;
(*iii*) defective ventilation in cake godowns;
(*iv*) carelessness in the timely and proper turning of cakes, whereby the surface not exposed sufficiently is attacked;
(*v*) defective manufacture of cakes by leaving patches in the leaves unsmeared with lewa.

291. To reduce risks from dampness the following points should be kept in view:—

(*a*) on a damp rainy day all the glass windows and skylights of a cake godown should be closed, and the damp air kept out as much as possible;
(*b*) if it is a very wet day the turning of the cakes should be deferred, provided this is not done two days in succession;
(*c*) the hanging up of the wet clothes of the godown coolies to dry should be strictly prohibited inside the godown;
(*d*) on the first fine day after the rain the cakes (if not too immature), and the inside of their cups, should be rubbed with fine dry trash, to remove any mould there may be, as well as to absorb all superfluous moisture from their surface;
(*e*) structural defects in cake godowns, such as defective drainage and ventilation, should be remedied, and leakage prevented.

292. After a fall of rain likely to have caused leakage, all the racks will, without loss of time, be carefully examined in order to ascertain whether any cakes have been damaged. Should the occurrence of a close holiday be likely to interfere with the performance of this duty, a special sirdar with a gang of boys will be told off for it beforehand. The assistant in charge of each godown will also attend on such

occasions, and supervise the work, reporting to the Factory Superintendent the extent and nature of the damage done, if any, in a register kept for the purpose (Factory Form No. 77), the damaged cakes being separated under the heads (*i*) slightly or superficially wetted, and (*ii*) badly wetted.

293. The cakes damaged and shown under the first head should at once be buried in fine dry trash, which acts as an absorbent for the excess moisture taken up by them, and in this trash they should remain till the next morning, when they should be rubbed and placed in dry cups. On the first sunny day these cakes should be put out in the sun for a few hours, being turned in their cups occasionally while being so sunned.

294. Those badly wetted require careful treatment. The wetting in this case is more than superficial, it has penetrated the shell, soaking the part penetrated and making it pulpy. If left alone, or only treated as a slightly wetted cake, the danger of grubs, black mould or dry rot is increased. The only safe course therefore is to operate on the cake within twenty-four hours after the damage is noticed and to cut away the part so damaged. Each leaf that has been soaked through should be carefully removed, until a dry surface is reached, and the part so laid bare should be remade with fresh leaf and lewa in the manner laid down for repairing cakes.

295. If in spite of precautions cakes are found to be attacked by grubs, the affected part should be treated by opening out the ramifications of the grub with a penknife, and by removing the grub if found. The incisions should be well brushed to remove all ova and excrementitious matter, after which lewa should be copiously applied and well rubbed in with the finger, and the opening finally sealed up with leaf.

296. Cakes are attacked by three descriptions of mould, the "white" (dactylium), the "yellow" (mucor), the "black" (ustilago). The first two have been found to be perfectly harmless. They are present in a greater or less degree according to the continuation of damp or cloudy weather, and they are easily detached by rubbing with cloth or trash in the usual process of turning cakes, without leaving behind any ill-effects.

297. Black mould is a fungus which attacks animal and vegetable substances; it is propagated by spores, which reproduce under favourable conditions of weather when rainfall is heavy and cloudy days predominate. It always attacks from without and not from within, the first sign of an attack on an opium shell being a black speck on the surface, or at the junction, of two layers of leaves. This speck, if rubbed, leaves on the finger a black streak as from a piece of wood charcoal. If the attack has been allowed to go on for some time, it will be found, on gradually opening up the cake, that the fungus has penetrated the shell by insinuating itself between the layers of leaves, and has made for itself nests in parts devoid of lewa, scrupulously avoiding those parts well smeared with it. In each one of the little nests described above the process of destruction and decay is carried on, and according to the number of them the undermining, so to speak, of the shell is more or less complete, making it liable to break down under the most ordinary strain.

298. All cakes found with the faintest suspicion of black mould should be at once isolated from the healthy cakes and kept separately. By chipping off a small portion of the leaf in the immediate proximity of the speck outside it can be ascertained whether the mould has penetrated. If it has not, the fungus growth should be removed entirely by brushing with a hard brush the part affected; lewa should then be freely applied to that part. If it is found that the mould has penetrated, then the shell should be laid bare gradually by following with a penknife the track of the mould until the whole of the affected part has been removed. This portion of the shell must then be remade in the ordinary way, lewa being freely used for it. Cakes affected with black mould should be kept distinct even after the necessary repairs, so as to ensure the certainty of their being effectually cured.

299. Under the head of accidents other than from leakage we have—

(*a*) fracture due to fall from a height;
(*b*) bruises from rough handling;
(*c*) damage from the nibbling of mice, rats and civet cats.

300. Bruised and nibbled cakes are easily repaired by treating the part affected with a little lewa and leaf and dusting it over with fine trash. A fractured cake needs the skill of an experienced cake-maker, and should be opened out and remade in the manner laid down for repairing cakes at sattai. It may even be necessary, in the case of a badly fractured cake, for the Factory Superintendent to decide whether the cake should not be taken off stock, broken up, and the opium transferred to the Lewa Department. This course should be adopted in every case where there is a suspicion of opium having exuded and having been lost.

CHAPTER VII.

PACKING AND DESPATCHING.

SECTION I.

Preliminary arrangements.

301. The Factory Superintendent is immediately responsible for the due observance of the rules for the packing of provision opium, and the despatching of packed chests to Calcutta.

302. He will see that all descriptions of packing material, sufficient for the season's outturn, are ready at the Factory each year by the 31st October. As soon as sattai begins, and until the stores requisite for the season are complete, the Factory Superintendent will submit for the information of the Agent a daily report, on the reverse of Factory Form No. 75, showing the quantity of packing stores actually in hand.

303. When the Factory Superintendent considers that the shells of the cakes made during the first fortnight of manufacture are sufficiently* matured and dry, he will report the fact to the Agent, who will at his discretion give the order for packing to begin.

304. Within a week before the packing begins, or on any other convenient day, the Agent will invite the Magistrate of the district to visit the Factory for the purpose of selecting cakes for examination and analysis. Six cakes will be selected at random by the Magistrate from the provision of the year. Two of the cakes so selected will be despatched, through the Board of Revenue, for examination and analysis by the Chemical Examiner to Government at Calcutta, two will be despatched to the Opium Examiner at Patna, and two retained at the Factory for a similar purpose. The cakes for Calcutta and Patna will be packed in the presence of the Magistrate, and the box sealed with his seal.

305. Two days before packing begins, the Assistant Factory Superintendent will have 2,000 cakes, the equivalent of 50 chests, taken at random from different parts of the godown from which the cakes are first to be packed, and will have them weighed, and the average weight of 40 cakes thus found will be reported to the Factory Superintendent. That officer will thereupon record the "initial packing weight"† for the godown.

The average weight of 40 cakes of each of the other godowns will be similarly ascertained two days before the godown begins to issue for packing.

306. The cakes will invariably be packed in the order of their manufacture, provided that the cakes of 12 (and not more)

* This will not usually happen until the beginning or middle of November. The manner of ascertaining the fitness of the cakes for packing has been laid down in Rule 281, Chapter VI, Section (vi).

† The "initial packing weight" of a godown is usually taken at one or two chittacks below the average weight of the godown; this margin compensates for the gradual loss in weight extending over the 10 or 12 days a godown is issuing to the scales. The packing weight of a godown should never fall below two maunds for 40 cakes.

Page 70, Chapter VII, Rule 304:—

Omit the words "through the Board of Revenue" in line 6 of the above rule.

Substitute the words "direct to" for the word "by" in line 7 of the same rule. 8-3-1902.

consecutive days' manufacture may, for the purpose of packing, be mixed together, except when they are of different caking consistences. In this case the packing of the cakes of the consistence first manufactured will be completed, in chests consecutively numbered, before the packing of the next consistence is commenced.

307. The Factory Superintendent will in good time submit through the Agent his indent on the Government Press for tickets (Factory Form No. 78) for the number of chests to be packed. The tickets will be printed in full, with blank spaces for the date, the scale number, the packing weight for the day, and the signature of the scale Assistant, and they will be numbered consecutively by the press from one to the last number of the chest to be packed in the season. The tickets should be received at the Factory not later than the 31st October in each year, when all their numbers will be checked in the Factory Superintendent's office, and they will be stored away in charge of the Head Clerk, in bundles of 500 consecutively, for use as required.

308. The Factory Superintendent will see that all arrangements affecting the packing and despatching of provision chests are made sufficiently in advance of the commencement of work. The important points to which attention is necessary are—

(*a*) the approval of the Board of Revenue (through the Opium Agent) to the date fixed for the packing to begin, so that the necessary arrangements might be made in Calcutta for the receipt of packed chests;

(*b*) arrangements with the railway authorities, for special trains on fixed days in the week, for the conveyance of the chests from the railway station to ~~Howrah,~~* Calcutta

(*c*) arrangements with the District Superintendent of Police, who details the necessary guard and escort for the protection of provision chests, both on their way from the Factory to the railway station and from the railway station to ~~Howrah~~; Calcutta

(*d*) application to the Traffic Manager, East Indian Railway (through the Agent), for free passes for the guard escort to and from ~~Howrah~~, and for the Assistant detailed annually to Calcutta; Calcutta

(*e*) appointment of the necessary temporary establishment to supplement the permanent staff of Factory assistants;

(*f*) arrangements with the Agents of the Railway Company for the through booking of the chests from Ghazipur, and their safe transit across the river.

SECTION II.

Examination of chests, &c.

309. It is primarily the duty of the storekeeper to see that all chests and lids are properly seasoned and fit for use in packing

* It is usually so arranged by the Traffic Manager, East Indian Railway, that special train Calcutta to ~~Howrah~~ run on alternate days from the two factories, each special carrying 1,000 chests.

before he issues them. He will be assisted in the examination of the packing material under his charge by a specially qualified carpenter and a sirdar, and if necessary by a temporary Assistant, who will be appointed by the Factory Superintendent.

Besides the above, there will be a special sirdar (permanent or temporary) told off by the Factory Superintendent to supervise, under the orders of the storekeeper, the drying, counting and sorting of each of the several packing articles, viz., chests, lids, compartments and mats.

310. No chest, lid or compartment will be issued for packing which has not been stored in the Factory for at least three months previously.*

311. All chests and lids intended for packing will be thoroughly sun-dried for at least two days before issue. On the day before issue the storekeeper will himself make a final examination of each chest and lid singly, and will chalk mark his initials on each lid, and on one inside wall of each chest as a token of their fitness for use in packing. During the intervening nights the chests and lids that are being sun-dried will be carefully placed under cover, and protected from exposure to the dew. No chests or lids will be brought out from under cover, either for packing or sun-drying, sooner than one hour before that fixed for packing to commence.

312. In the examination of chests and lids the attention of the storekeeper and his assistant should be directed to the following points:—

(*a*) that every chest and lid is shown, by the date it bears, to have been stored in the Factory for not less than three months;
(*b*) that it is thoroughly seasoned and properly dry;
(*c*) that it is free from 'goon' and dry rot;
(*d*) that it has no bad cracks.

313. Chests and lids suspected of being damp or presenting a mildewed surface will be chipped with an adze in order to determine whether the dampness —

(*a*) is superficial owing to surface condensation of atmospheric moisture;
(*b*) is due to the wood being unseasoned;
(*c*) is due to the chests and lids being wetted by leakage.†

314. If the storekeeper or his assistant considers that any chests or lids should be rejected as unfit for present use, by reason of their being damp or unseasoned, he will set them aside for the inspection of the Factory Superintendent, and that officer will pass suitable orders

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* All chests and lids, whether hand or machine-made or received from contractors, will be serially numbered, and will be stamped with the month and year of manufacture or receipt.

† In any case the chest or lid (if found to be damp) will be returned to the chest department. In case (*a*) a few days' sun-drying will render the article fit for use. In case (*b*) the defect being of a more permanent nature, the article will be returned to stock and will not be again issued for use until the ensuing season. If the dampness is superficial, the deeper the incision, the drier the wood will be found to be. The contrary will be the case if the dampness is due to the wood being unseasoned. Unseasoned sâl wood may be further recognized by the pink fleshy appearance (which will be found to extend throughout the length of the plank) presented by the interior of the wood. If, however, the wood has been wetted after being properly seasoned, this sign will be absent; the dampness will also extend only to that portion of the plank which has been exposed to the action of the water.

regarding them. If the Factory Superintendent directs chests and lids so set aside to be rejected as unfit for present use, he will cause his orders, the reason therefor, and the date to be noted in chalk upon each article.

315. In the examination of chests and lids, previous to packing, the carpenter and the sirdar will ring with a chalk mark any water stains found by them. The storekeeper or his assistant will examine every such water stain, and if on examination the chest or lid so marked is found to be dry and fit for use, he will pass it for packing by adding his initials inside the chalk ring. This mark will be allowed to remain permanently on the chest or lid as evidence of the stain having been noticed and examined.

316. Compartments will be put together in sets under the orders of the storekeeper. They must all be thoroughly seasoned, dry, free from "goon," and with all the partitions complete, or so far complete that there will be no danger of two adjacent cakes touching each other when placed inside a chest. Like chests and lids, compartments, after being put together, will be sun-dried for at least two days before being used.

317. The storekeeper will cause the mats to be properly sun-dried on at least two days before they are used, and he and his assistant will satisfy themselves as to their dryness and soundness before he allows them to be issued for packing. No mats will be used that have not been stored in the Factory for at least three months.

318. After completion of the examination the storekeeper will cause the chests for the next day's packing to be ranged in the place allotted for the purpose according to the requirements of each scale, and will have them serially numbered with the packing numbers for the day. These numbers he will check before the Factory closes in the evening.

319. At the end of each day's work the storekeeper will submit a report (Factory Form No. 79) showing the number or quantity of each description of packing stores issued for the day's work. This report will further show in the remark column the date and year to which the chests and lids used during the day belonged, as shown by the date stamped on them; the reason for the issue of any stores in excess of the authorized allowance laid down by the Factory Superintendent; the number of sets of compartments found unfit for use; and also any other special points connected with the day's issue of packing stores. This report, with the Factory Superintendent's signature, will stand as the authority to the storekeeper for the issue of the requisite packing stores, and the adjustment of his books.

320. The storekeeper's assistant will also submit daily to the Factory Superintendent a report showing the description and amount of work done by him in his examination of packing stores.

SECTION III.

Trash for packing.

321. The Assistant in charge of the trash department is primarily responsible that sound, clean, and dry trash only is issued for packing.

322. At about 10 A.M. on the morning before the trash is required for packing, the Assistant in charge will cause the necessary number of bags of cleaned trash to be opened, and the contents to be spread out in the sun on oilpaulins. There the trash will be stirred by rakes at intervals of one hour, so that the whole quantity may be exposed to the action of the sun. The empty bags in which the trash is to be conveyed to the packing room will also be laid out in the sun to dry.

323. The Assistant in charge of the trash department, with the help of his sirdar, will carefully examine all the trash that has been laid out to dry, and will satisfy himself that it is neither damp, musty, nor heated, and that the bags are perfectly dry. Should the Assistant have doubts as to the fitness for packing of any portion of the trash, he will at once bring the matter to the notice of the Factory Superintendent by a report in his memorandum book, and take that officer's orders before sending the trash to the packing room.

324. About 2 P.M., if the examination is considered satisfactory, the trash will be replaced in the bags, and will be conveyed into the packing room, where the bags will be emptied out on oilpaulins in convenient heaps, and in places specially set apart for the purpose. The whole of the trash will thus remain under cover for the night.

325. Early on the morning of each packing day the Assistant Opium Examiner will cause to be taken in his presence several samples from the heaps of sun-dried trash of the previous day in the packing room. All these samples will be mixed together in the laboratory, and out of the mass one sample of five seers will be carefully weighed, steam-dried at 200° Fahr. for at least three hours, and reweighed until the difference in loss by two successive reweighments is imperceptible.

326. The final result of the steam-drying will be recorded in Factory Form No. 80, and will be submitted daily to the Factory Superintendent for his orders. The loss in weight will be shown in kutchas, and if it does not exceed 24 kutchas in 5 seers, the Factory Superintendent will give orders for the packing to proceed; but should the loss exceed 24 kutchas in 5 seers, the trash will be deemed unfit for use, and packing will be deferred and the matter at once reported to the Agent. Every effort will meanwhile be made by means of sun-drying to render the trash at the Factory fit for use.

327. The issue of the trash will be made on indent (Factory Form No. 26), which will show the number of chests to be packed, and the rate of trash per chest based on the results of the Factory Superintendent's and Assistant Factory Superintendent's examination of packed chests (*vide* Rules 342 and 343) plus one seer per chest in excess as wastage.

SECTION IV.

Control and general arrangements.

328. Packing will be conducted under the general superintendence of the Factory Superintendent, under whom the Assistant Factory Superintendent will be in direct executive charge.

329. The Assistant Factory Superintendent will be present during the whole time packing is going on, and will maintain an active supervision over the work in all its stages. His control of the work does not cease for the day until the last chest is dammered, and the chests securely locked in for the night by himself, the key of the outer lock of the packing room being retained in his possession.

330. He will be careful to ascertain from the Assistants if they have any complaints to make regarding the quality of any of the packing materials, or of the cakes; he will keep a diary in which he will note whether any complaints of the kind have been preferred or not; the nature of the complaints, if any, by whom made; and the action taken by him; and any other circumstances of importance coming to his notice or occurring during the day. This diary will be submitted daily for the Factory Superintendent's information and orders. The Factory Superintendent will sign it, recording any remarks or orders he may consider necessary and return it to the Assistant Factory Superintendent. A copy of this diary will be submitted once a week to the Agent with the Factory Superintendent's remarks.

331. The Assistant Factory Superintendent will, under the orders of the Factory Superintendent, exercise direct control over the whole subordinate packing staff, and will see that only men with previous knowledge of packing work, as far as available, are employed, and that no new hands are taken on who do not show aptitude for the work.

332. Each morning, an hour before that fixed for the commencement of packing (Sundays and close holidays excepted), the Factory Superintendent after observing the thermometers, the direction of the wind, and general appearance of the weather, will decide whether packing is to proceed or not.

333. During packing a daily record will be kept by the Assistant Opium Examiner of the temperature shown by the wet and dry bulb thermometers, of the humidity of the atmosphere, of the state of the sky, and of the direction of the wind, the observations being taken daily immediately before the commencement and at the close of the day's packing (Factory Form No. 80).

334. Packing will go forward on dry days only, and it will be suspended during damp, cloudy or rainy weather. Packing will in no case go forward on days when the relative humidity of the atmosphere exceeds 75°, saturation being represented by 100.

335. In the event of rain, packing will not be resumed till after the lapse of three full days (at least 72 hours) from the last fall of rain, other conditions of weather being favourable, so as to ensure the packing materials and all surroundings being perfectly dry.

336. Four scales will ordinarily be worked during packing, numbered from I to IV, each scale weighing 125 chests during the day; and to the charge of every two scales the Factory Superintendent will appoint a separate assistant. At each scale there will also be two cake examiners (either two permanent sirdars or one temporary sirdar and one cake-maker), one packer, who will be a permanent sirdar, one weighman, and the requisite number of beldars and boys.

337. Before each day's packing begins the head clerk of the Factory Superintendent's office will see to the preparation of tickets for

the number of chests to be packed on that day, by having written on them the date of packing and the packing weight for the day. The latter he will obtain from the "Register of packing weight" (Factory Form No. 81), which will be kept up under the orders of the Assistant Factory Superintendent, and initialled daily by that officer as well as by the Factory Superintendent. Each ticket will also have impressed on it the scale number, the first scale taking the first 125 chests, the second scale the next 125, and so on.

338. During the packing season the head sirdar, who will be present for the general supervision of the preparations for the day's work, will cause the first bell to be rung an hour before that fixed for the commencement of packing, when the Assistant in charge of the cake godown, from which cakes are to be issued, will have his cakes taken out of their cups and arranged on a bed of trash in the verandah (or on a shady side of the godown) in jettas of 500 or 1,000, as may be most convenient. At the same time the malkhana sirdar (or one of the parkhias) will cause the trash which is to be used at the scales to be taken out from under cover and to be heaped up in the sun, or other convenient place opposite the scales, set apart for the purpose.

339. At 15 minutes before the hour fixed for the commencement of packing, the head sirdar will cause the second bell to be rung, when the cakes will be carried, jetta by jetta, in barrows holding 20 cakes each, to the packing ground, where they will be laid out on a bed of trash behind the scales. At the same time the packers, weighmen, examiners, and coolies will all fall into their places, ready for the work to begin.

340. A little before the hour fixed for the commencement of packing, the Factory Superintendent, or the Assistant Factory Superintendent in the absence of the former, will test all the scale-beams and pans to see that they are true, and the maund weight of each scale will be tested with a standard maund test weight kept for the purpose. Once a week the smaller weights at the scales will be similarly tested.

341. At the hour fixed all conditions as to weather humidity in trash, &c., being favourable, the Factory Superintendent, or the Assistant Factory Superintendent, under the orders of the Factory Superintendent, will cause the third bell to ring, when work at all four scales will begin for the day.

342. Each day during packing the Factory Superintendent will from time to time visit the packing-room and scales, and will satisfy himself that the work in all its details is being properly carried out. He will further take out at random not less than one per cent. of the chests packed during the day (either before or after the lids have been fastened down), and will satisfy himself that the cakes are all sound and have been properly secured in their places, and he will weigh—

(*a*) the cakes in batches of twenty to see if the packing weight for the day is being accurately maintained;

(*b*) the trash of both the upper and lower layers in each chest, either combined or separately;

and will record the results in a book kept for the purpose (Factory Form No. 82).

343. The Assistant Factory Superintendent will open up the same percentage of, and exercise similar check over, the packed chests as laid down in Rule 342 for the Factory Superintendent. To save time he should give the preference, when they are available, to damaged chests which have to be repacked in his presence. His record of check weighments should be submitted weekly for the inspection of the Factory Superintendent.

344. The Factory Superintendent will also each afternoon inspect a portion of the chests and lids passed by the storekeeper before they are removed under cover for the night, and will assure himself that the examination of these articles has been properly conducted. He will also daily inspect the trash laid out in the sun to dry, and the trash in process of being cleaned.

SECTION V.

Scale Assistant's duties.

345. The scale Assistant is responsible that 20 sound cakes are packed securely in the lower half of a chest, and that 20 sound cakes are placed in the upper half; that the weight of each lot of 20 cakes is equal to half the packing weight for the day, plus the usual allowance if necessary; that the packing materials used at his scale are, to all appearances, sound and free from damp.

346. At the hour fixed for packing(u sually 10 A.M.), when the bell rings, work will begin at the scales, by the cake-examiners, eated on the bed of trash behind the scales, who will carefully examine each cake for soft places, cracks, bruises, grub-holes, &c., and will pass on the sound cakes to the cake-makers at the scale, who will gently place them on the scale pan. Faulty cakes will be marked with chalk at the place of the fault, and will be set aside for return to the godown at the close of the day's packing.

347. The Assistant in charge of a scale will keep a proper control over the work of the examiners by occasionally satisfying himself that the cakes on the scale pan are sound and free from faults. A cake that is sound and fit to pack—

(*a*) is firm to an even pressure of the palms of the hand;
(*b*) gives no continued sensation of cold or dampness from its surface when pressed with the palms of the hand;
(*c*) is not grub-eaten anywhere;
(*d*) is not fractured or bruised;
(*e*) is not affected with black mould.

348. The 40 cakes for each chest will be weighed, 20 at a time, against a weight equal to one-half of the packing weight for the day, as shown on the tickets. Should any lot of 20 cakes be found either too heavy or too light, a few cakes will be removed and replaced by others so as to adjust the weight. In no case must any lot of 20 cakes be less than one-half of the packing weight for the day. Should the cakes run heavy, and delay thus arise in the adjustment of the weight, a turn of the scale equal to four chittacks per chest, that is, two chittacks per 20

cakes, will be allowed; but this allowance must only be in addition to, and not in diminution of, the packing weight for the day.

349. The Assistant in charge of a scale will observe the indicator needle when the weight of each lot of 20 cakes is called out by the weighman, and will notice whether the weights on the scale correspond with the weight called. On the Assistant being satisfied as to the correctness of the weight and the fitness for packing of each lot of 20 cakes, he will direct them to be removed from the scale pan and to be placed inside the chest.

350. By the time the 20 cakes for the lower layer have been weighed, the chest about to be packed will have been placed in position in front of the scales across a small bar of wood resting on a gunny pad. The trash boy will spread evenly over the bottom of the chest about two seers of trash (measured in a small box at hand for the purpose), over which another boy will adjust one of the compartment frames. The packer and his boys will then receive the 20 cakes from the beldars at the scale, and place them in their compartments.

351. The 20 cakes of the lower half of the chest being in their places, the packer will call out "bisgotee," and the Assistant in charge of the scale having seen that each compartment contains a cake will direct the packing of the chest to be proceeded with. The second trash boy will then throw into the chest trash from a larger wooden measure,* the chest will be gently seesawed over the wooden bar in order to shake down the trash, and the packer and the packing boys will press the trash firmly down with their finger tips round each ball, taking care completely to fill in the four corners of each compartment. The 20 cakes having been tightly secured in this manner against any displacement by jolting, more trash will be added, if necessary, to reach just over the level of the top of the compartments. The mat will then be laid in the chest, and a second compartment frame placed on top of the mat.

352. If the second compartment frame lies somewhat below the upper edge of the chest, the packing of the lower layer will be assumed to be properly done, and the 20 cakes for the upper layer will be weighed and placed loose in their compartments. If, however, the upper compartment frame is on a level with, or projects, over the edge of the chest, the mat will again have to be taken up, and the packing of the lower layer adjusted.

353. The cakes of the upper layer being placed loosely in their compartments, the ticket for the chest will then† be signed by the Assistant in charge of the scale, and will be dropped into one of the middle compartments of the upper layer by the number boy, who will first satisfy himself that the number on the ticket and on the chest are identical, and the chest will be carried away into the packing room, where the packing of the upper layer will be conducted under separate superintendence.

354. During the packing of the lower layer the Assistant will watch closely the work of the packer and boys, and will frequently test the packing with his fingers, to satisfy himself that the trash has

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* About 9½ to 10 seers.

† Tickets must always be signed at the scale, and singly, as the packing of each chest is completed, so far as the scale Assistant is concerned.

been well pressed round the cakes so as to firmly fix them in their places. He will also see, while the cakes are being transferred from the scale pan to the chest, that they are carefully handled, and are not injured or chafed by being dropped from a height or roughly forced into the compartments.

355. Except in special cases and with the sanction of the Agent not more than 125 chests will be packed daily at each scale, and work at the scales will be continued uninterruptedly from the time the bell rings (usually) at 10 A.M. till 1 P.M., when an interval of a quarter of an hour will be allowed to the Assistants and others at the scales. The work will be resumed again at 1-15 P.M., and will be carried through until the day's work is over.

356. The Assistant in charge of a scale must see that the packing of the cakes is done slowly, carefully and thoroughly, and that the men under him do not lounge about, but work smartly and intelligently. And in order that the work may not be hurried, a bell will be rung every 15 minutes to mark the time. As soon as each bell rings the Assistant in charge of a scale will keep tally of the work by noting in his note-book the hour and the number of the chest then being packed at the scale, and it will be his duty to see that in no case are cakes for more than 7 chests weighed off between any two bells.

357. The Assistant in charge of a scale will be careful never to leave his scale while there is a filled or a half-filled chest lying there, or while work is proceeding. When the bell rings at 1 P.M. the packing of the chest then at the scale will be completed, and the chest sent away to the packing room before the interval of a quarter of an hour is taken.

358. The Assistant in charge of a scale will satisfy himself that the chests, mats and compartments being used at his scale are all dry and fit for packing, and that none are affected by "goon" or dry-rot. He will see that the empty chests being brought up to his scale are not dragged along the ground so as to injure the dammering, but are lifted into position by two beldars. Compartment frames that have their divisions broken to such an extent as to cause two adjacent cakes to touch each other, or to injure a cake by their broken and sharp edges, should be rejected. He will also be careful to notice that the trash being used for the lower layer is neither damp, musty, heated nor caked into lumps. Any article suspected of being damp or defective should at once be set aside, to be brought to the notice of the Factory Superintendent, or the Assistant Factory Superintendent, whichever officer happens to visit the scale first, and the Assistant in charge of the scale will make a note of the circumstance in his note-book.

359. The head sirdar will be present at the scales throughout the time packing is proceeding, and will keep a general control over the work of the cake examiners and other subordinates at the scales. He will also render the Assistants in charge of scales any aid that may be necessary.

360. The malkhana sirdar (or one of the parkhias) will be placed in direct supervision over the trash heaped up in the open yard (or such other place appointed for it) for the use of the scales, and he

will satisfy himself that every basketful carried to the scales is neither damp, musty nor heated; and that none of the trash has been caked into lumps.

361. At the close of the day's work at the scales, the scale Assistants will fill up the necessary forms (Factory Forms No. 83 and No. 84) showing full details of the work done at the scales, viz. number of chests packed, number of cakes rejected, and the names of the examiners, weighmen, and packers at the different scales. They will also sign the certificate (Factory Form No. 85) and fill in the hour at which packing began and ended at their scales.

362. The Assistant in charge of the issuing godown will, in company with the head sirdar, and in the presence of the scale Assistants, count over the rejections at the scales, and if the number agrees with the number entered in column 6 of Factory Form No. 84, he will also initial the form in token of having taken over charge of the rejected cakes. He will then have these cakes conveyed to the cake godown, where they will be put up on the racks again in cups for subsequent repairs, and will enter in his godown register the number of cakes packed from the godown, the number rejected, and the total number of rejected and sound cakes remaining in the godown.

363. The Assistant Factory Superintendent will at the close of the day's packing write up his general register of cakes (Factory form No. 71) showing the number packed and the balance remaining in the factory.

SECTION VI.

Packing of upper layer of cakes.

364. For the packing of the upper layer of cakes the Factory Superintendent will appoint two assistants who will have, between them, the supervision of the entire number of chests being packed during the day. If the available accommodation makes it possible, each Assistant will have the entire and separate control of the chests from two scales, or 250 chests.

365. For this duty the two Assistants will be allowed between them 20 cake-makers for filling in, and 2 cake-makers for levelling off the trash. With each Assistant there will also be one mate sirdar, or examiner of packing to assist in the general supervision of the work.

366. As each chest is brought from the scales to the packing-room, the Assistant and examiner under whom it is to be packed will each run his eyes over the top layer and see—

(*a*) that each division in the upper compartment frame contains a cake;

(*b*) that each chest contains a ticket in one of the middle compartments;

(*c*) that the upper compartment frame and all the twenty cakes are somewhat below the level of the top edge of the chest.

367. The upper layer of cakes will be packed in the same manner as the lower layer, except that no trash will be placed beneath the

"place in the trash immediately below the lid a ticket bearing his signature under the words 'Upper Layer Packed by me,' "

8-3-94.

cakes which will be allowed to rest upon the mat. The cakes being tightly packed as directed in Rule 351 of the preceding section, a layer of trash will be spread over them and pressed firmly down with the palms of the men's hands. The trash will then be levelled off by a flat rule about one-fourth of an inch above the walls of the chest. The Assistant will now examine the packing of the chest with his finger tips, and if he passes it, a lid examined and found by the Assistant or the mate sirdar to be neither small nor defective, will be laid on the top of the trash ready to be nailed down, and the Assistant will ~~chalk-mark it with his initials.~~

368. The points to be carefully noted by the Assistant in packing the upper layer, in addition to those enumerated in Rule 366, are—

(*a*) that the trash has been well pressed round the cakes so as to firmly fix them in their places; to this end he will test with his fingers *each* chest before the lid is put on;

(*b*) that the surplus trash is levelled off at the proper height above the walls of the chest;

(*c*) that each lid before it is placed on the chest is examined as to its size and its fitness with special reference to its being affected by damp, "goon" or dry rot.

369. One of the permanent parkhias will be told off by the Factory Superintendent at the beginning of the packing season to the supervision of the trash in the packing-room for the upper layers of the chests; and it will be his duty to examine the trash continually throughout the day, and to satisfy himself that every basketful used in the packing is neither damp, musty, nor heated, and that none of the trash has been caked into lumps.

370. All chests will be packed in the order they are received from the scales, and the Assistants will be careful to see that the packers do not press heavily with the palms of their hands on the cakes, nor sit on the walls of the chests while packing. Any defect found in the trash, or dampness in the lids, should at once be brought to the notice of the Factory Superintendent or of the Assistant Factory Superintendent, whichever officer happens to visit the packing-room first, and the assistant will make a note of the circumstance in his note-book.

371. As the top of each chest is levelled off with a flat rule, the excess trash which drops on the floor will be at once collected by two boys, specially entertained, and the trash utilized in other chests. A large waste of trash from being mixed up with chips of wood and pitch, and trodden into dust, will thus be avoided.

372. When the scales stop at 1 P.M., an interval of a quarter of an hour will be allowed to the Assistants packing the upper layers, and at no other time until the close of work are these Assistants allowed to leave the packing-room; nor should both Assistants leave the packing-room at the same time. The intervals will be taken in succession from 1 to 1-15 P.M., and from 1-15 to 1-30 P.M., by the two assistants respectively, and when one assistant is absent the other assistant will undertake the entire supervision of the work. The packing-room will thus never be left without an Assistant.

373. The Assistants packing the upper layers will not leave the packing-room at the close of work until two sides of the lid of each chest packed by them are nailed down. Before quitting the packing-room each Assistant will sign the certificate (in Factory Form No. 85), noting the hour at which he quitted the packing-room. The Assistants will also note on this certificate the names of the parkhia and mate sirdar on duty with them during the day's work.

SECTION VII.

Nailing down of packed chests.

374. The Factory Superintendent will appoint one assistant, whose duty will be to supervise the work of the carpenters in nailing down the entire number of chests packed daily. The chests will come under the supervision of this Assistant as the packing of the upper layer of each chest is completed and a lid placed on the chest as described in Rule 367 of the preceding section.

375. Under this Assistant there will be placed two permanent Factory carpenters to supervise the work of the temporary men, and four sirdars, permanent or temporary, to assist him in examining the nailing down of the lid of each chest before it is finally passed.

376. The nailing down of the lids of packed chests will be done in this wise:—

(*a*) the first set of carpenters will nail down the sides and ends of lids that are ready trimmed and bored ;

(*b*) a second set, consisting of sawyers, will then saw off the projecting ends of the lids not nailed down ; and will also see, before passing on to the next chest, if there is any projection on the nailed end, which should likewise be sawn off ;

(*c*) the end squared with the saw will now be bored, and a third set of carpenters will nail down this end ;

(*d*) each chest as it has two ends and a side nailed down will be turned over on its nailed side by two beldars, and one of a fourth set of carpenters will take off the superfluous wood from the remaining side (the grain running with the length of the chest) with a "basula." Should there be a knot to go through, or the wood be cross-grained, a saw and not a "basula" will be used to prevent damage to the lid ;

(*e*) the chest will then be turned over again on its bottom, and the remaining side bored and nailed down by a fifth set of carpenters.

This will complete the nailing down of the lid of a packed chest.

377. To nail down the lid of a mango wood chest of one inch planking, 3 inch iron nails of about 88 to a seer will be used. And the number required for each lid will be four for each end, and three for each side, making fourteen in all, not taking into account any extra

nails that may be used for giving greater security to the lid where it is needed. For a sál wood chest twenty-four 2½-inch nails will be required.

378. As the nailing down of each lid is completed it will be examined carefully by one of the four sirdars, among whom the entire number of chests for the day will be distributed. The sirdar will mark in chalk all faults that have to be rectified, such as additional nails to be put in where needed, taking off projections where they exist, &c. All these defects that have been chalk-marked will be at once rectified by a special set of carpenters.

379. Of the two permanent carpenters, one will supervise the work of the first three sets of carpenters, the other the work of the fourth and fifth sets, as detailed above, under the several heads of Rule 376; the second permanent carpenter will also supervise the work of the special set of carpenters mentioned in Rule 378.

380. The defects in nailing down having been rectified as directed in Rule 378, the Assistant will then personally examine each chest and satisfy himself that—

(*i*) the lid is securely nailed down ;
(*ii*) the lid does not project at the sides and ends ;
(*iii*) there are no gaping cracks or joins ;
(*iv*) to all appearance the chest and lid are sound.

He will then affix his initials in chalk on the lid, and the chest will pass to the dammerers.

381. Should any lid or part of a lid after it is nailed down be found to be affected by dry rot or "goon," or to be so damaged as to be unfit to be left on the chest, the Assistant will have it removed, and another lid or part of a lid substituted in his presence, making a note of the occurrence and recording the number of the chest in his note-book.

382. Should a *chest* be found to be damaged during the nailing, the Assistant will at once draw the attention of the Assistant Factory Superintendent to it, and that officer will, if he thinks the damage slight, order the chest to be repaired ; or if he thinks it necessary he will have the contents of the chest transferred to a new chest. The transferring of the contents of one chest into another, and its repacking will on no account be done except in the presence of the Assistant Factory Superintendent or the Factory Superintendent, and the officer before whom it is done will record in his note-book the occurrence and the number of the chest repacked.

383. The assistant will immediately bring to the notice of the Factory Superintendent or the Assistant Factory Superintendent any dampness or suspicion of dampness in either chests or lids ; or the fact of their having been less than three months in the Factory, which he will be careful to note from dates that may be visible on the chests and lids. When bringing to notice any of the circumstances noted in this rule, he will record also the occurrence in his note-book and take against it the initials of the officer to whom the report is made.

384. Before a lid is placed on a chest it will have the proper number of holes bored on the trimmed side and end. This work will be done by the carpenters on the previous evening after completion of

the day's work and before work begins in the morning. The object of this rule is to prevent cakes being pierced by "burmahs" when boring is carelessly done on the chests.

385. Every morning before work begins, the assistant will examine the saws, basulas, hammers, and burmahs of all the carpenters, and will satisfy himself that they are all fit for use, rejecting any that are not fit. Saws, burmahs, and hammers will be supplied by the Factory, the carpenters bringing their own basulas. The hammers used at the packing should weigh about 1¼ to 1½ lbs each.

386. Two boys specially told off will collect all the chips of wood resulting from the packing as the work proceeds, and will heap it up in a place set apart for the purpose. At the end of the day's work the Assistant with the help of the Factory weighman will weigh the chips and will record the weight in a book kept for the purpose, which he will send to the Store-keeper daily after completion of his weighment. The Store-keeper, after bringing on his books the gross weight of the chips as wood fuel, will initial and return the weighment book to the Assistant, and will have the chips transferred to the Store Department.

387. When the day's work is completed, the Assistant will affix his signature in the proper place on the certificate (Factory Form No. 85), and will note on it the hour at which the nailing for the day was finished.

SECTION VIII.

Dammering, sewing gunny covers and numbering.

388. The Factory Superintendent will appoint one Assistant, whose duty will be to supervise the dammering, the sewing the gunny covers, and the numbering of packed chests.

389. He will be assisted in his duties—

(*a*) in dammering, by four sirdars, one at least being a permanent sirdar;

(*b*) in sewing of covers, by two sirdars, one of whom must be a permanent sirdar;

(*c*) in numbering, by (1) two stampers, (2) two sirdars for checking numbers in English and Hindi, one of whom must be a permanent sirdar, and (3) two temporary sirdars as Assistants to the latter for calling out the numbers on the chests.

390. After a chest has been initialled by the nailing Assistant, as described in the preceding section, Rule 380, it comes under the supervision of the dammering Assistant, who will send for the dammerers as soon as the nailing of the first 30 or 40 chests has been completed.

391. The arrangements for dammering, such as the issue of pitch and cloth, the boiling of the pitch and the cutting of the cloth into strips, will be made by the Store-keeper, in accordance with orders laid down separately for his guidance. It will, however, be the duty of the Assistant in this section to see that the dammer brought to the packing room

is quite hot, that no cold dammer is ever used, and that the cloth is cut beforehand into strips 3½″ and 2″ wide, the narrow strips for the joins in the lids and cracks, and the wide strips for the join of the lid and the chest.

392. The work of dammering will begin by two sets of beldars placing strips of cloth over the joins and cracks. One set, with narrow strips, will go ahead and cover over all joins and cracks on the lid, and they will be followed by a second set with broad strips, who will cover over the join of the lid and chests. The upper edge of the broad strips must always lie about an inch on the top surface of the lid, and the lower edge must overlap the join of the lid and chest by about an inch. The ends of the narrow strips, over joins in the lids, must always be inserted under the broad strips.

393. The dammerers will then follow and dammer over the strips of cloth, taking care not to move the cloth from its position over cracks and joins, and to lay the dammer on neatly and while still hot, over the surface of the cloth only, without smearing over the rest of the chest and obliterating numbers or other marks.

394. As a chest is dammered the end away from the dammerer will be examined all round by one of the sirdars, and any defects in the old or new dammering rectified; the chest will then be raised on that end by two beldars. Two of the other sirdars between whom the chests on the right and on the left of the room have been divided off, will follow and examine each chest all round, as it stands on its end, and will have all defects in the old and the new dammering similarly rectified.

395. The Assistant, with the permanent sirdar, will then follow and will examine each chest personally, and if it is found to be well dammered with no cracks or openings showing and otherwise sound, he will mark his initials in chalk on the top end.

396. During his examination the Assistant will have at least five per cent. of the chests turned right over so as to examine the end on the ground, and to satisfy himself that the work of the first sirdar, as described in Rule 394, is being properly performed.

397. Any defects found by the sirdars in the chests themselves, such as the starting of lids or bottoms, or other damage to any part of the chest will be marked in chalk for the inspection of the Assistant. If the damage is slight and easily repairable, the Assistant will have it repaired, otherwise he will bring the matter to the notice of the Assistant Factory Superintendent, who will direct the course to be followed. The number of every chest thus brought to notice as faulty will be taken down by the Assistant in his note-book, and after the necessary repairs have been done, or the contents transferred to another chest (by the Assistant Factory Superintendent) as the case may be, the chest will be re-examined, and initialled and passed in the usual way, the Assistant initialling also the number already entered in his note-book, as a token that the chest has been finally passed.

398. As each row of chests is initialled and passed by the Assistant, the "Telis" will take them up for sewing on gunny covers. Thus the Telis will always be behind the Assistant as he proceeds in his examination, and all risk of chests being sewn up without examination avoided.

A chest that is not initialled will on no account be taken up by the Telis.

399. Before the packing season begins the Factory Superintendent will appoint the requisite number of Telis and will apportion to each the maximum number of chests he may sew according to the proficiency shown by him in previous years. The Telis will be paid for their work at a fixed rate per 1,000 chests, and the maximum number a Teli will be allowed to sew in a day will be 15 chests. The muster roll of the Telis, with the daily amount of work done by each, will be kept up by the Assistant in charge of this section, and will be submitted daily to the Assistant Factory Superintendent for his inspection and signature, and weekly to the Factory Superintendent.

400. It is not permitted to sew the gunny pieces together, apart from the chest like a bag and then to slip this over the chest, but the gunny must be sewn on to the chest tightly, and in three separate pieces; first, the broad piece being sewn round the length of the chest, with the Agency inscription and number on the lid, and the two narrow pieces on the sides being sewn on to this. The narrow piece, for the side of the chest bearing the number, should be left until the number has been stamped on the broad gunny piece on the lid. The sewing must always be along the edges of a chest, and not on the flat surfaces of the sides. Care must be taken, too, in fitting on gunny, that the pieces fit the chests. Both hand-made chests and gunny pieces are apt to vary somewhat in size. If a piece is found to be too narrow for a chest, it should not be forced on to it, but should be set aside and tried on a chest of smaller dimensions.

401. A gunny covering to be strongly and properly sewn should have a stitch to every inch of running length. The minimum number or stitches allowed will be—

30	stitches	in the	length,
24	,,	,,	breadth,
12	,,	,,	depth,

provided the sewing is well and uniformly done.

402. No water-marked or damaged gunny will be issued by the Store-keeper, and any found by the Assistant in charge of this section, during his examination of the sewing, should at once be brought to the notice of the Assistant Factory Superintendent, who, after inspection, will give the necessary orders.

403. The Assistant will exercise general control over the sewing, and the two sirdars specially detailed for this work will be in constant attendance, and will bring to notice any Telis not doing their work as laid down in this section. The permanent sirdar will keep in Hindi the muster of Telis, and the amount of work done daily by each man, the register being a counterpart of the English book kept up by the Assistant, who will compare daily the two books, and enquire into and rectify at once any discrepancies, bringing such to the notice of the Assistant Factory Superintendent. The permanent sirdar will be held responsible that the chests sewn by each Teli is at once recognizable by the distinctive mark of that Teli, or by any other means, so that bad work can be brought home to the men.

404. As the Telis sew on the broad pieces of gunny, the numbering sirdars and stampers will number the chests. One sirdar will call out the number shown on the side of the chest, a second sirdar will at once tick it off in the Hindi register, and the stamper will stamp the number on the gunny, taking care that the numbers are stamped in a uniform line. On no account is the number to be stamped on a gunny piece until it is actually sewn on to the chest. All danger of the number on the chest not tallying with the number on the gunny covering will thus be avoided.

405. At 10 A.M. on the morning after the packing when the sewing has been completed, the Assistant will tally the chests with the help of printed tally-sheets (Factory Form No. 86), the permanent sirdar calling out the numbers on the chests, and chalk-marking each chest whose number has been called, and the Assistant running a coloured pencil through the number on the tally-sheet.

406. Daily at the close of work the Assistant under this section will sign the certificate (Factory Form No 85) so far as it concerns him, noting the hour at which his examination of the dammering ended and the numbers of any damaged chests he may have set aside for repairs till next morning.

SECTION IX.

Despatch of Chests from Factory

407. On the morning fixed for a despatch, all arrangements for the safe transit of the chests to the waggons having been previously made, the Factory Superintendent will, after satisfying himself as to conditions of weather, personally give orders for the chests to be taken up. No chests will pass out of the Factory before sunrise, nor will chests be despatched on damp, cloudy or rainy days. In the event of its being necessary to suspend despatches, owing to unfavourable weather or other cause, the Factory Superintendent will give immediate intimation of the fact to the railway authorities, and also to the Board of Revenue, and to the Opium Agent.

408. As each chest passes out, a permanent Factory Assistant, specially told off for the duty, will keep tally of its number by running a coloured pencil through that number shown on the printed tally-sheets. He will be assisted in this duty by a permanent sirdar, who will call out the number of each chest as it passes the Assistant.

409. A clerk of the Factory Superintendent's office will be stationed outside the gate, and will take down the number of each chest as it passes out of the gate, as a check on the permanent Assistant's tally. The clerk will also be assisted by a permanent sirdar for calling out the numbers of the chests as they pass.

410. The Assistant tallying the chests will weigh 5 per cent. of them or 25 chests out of a daily despatch of 500. The chests to be weighed will be taken by him at random as they are passing out, and their weights will be recorded in a register (Factory Form No. 87), which will be submitted daily for the information of the Factory Superintendent.

411. One Assistant, either permanent or temporary, according to roster previously approved by the Factory Superintendent and published in Factory orders, will be present throughout the time the boats are being loaded. An officer of the Factory guard, either the Sub-Inspector, the jemadar or the naib jemadar will also be present at the ghât throughout the time loading and despatching continues

412. Special attention will be paid by the Assistant at the ghât to the following points :—

(*a*) that the boats are those previously approved by the Factory Superintendent ;
(*b*) that they are then in a seaworthy condition ;
(*c*) that there are no fires or ashes on them ;
(*d*) that the boats are perfectly dry, with no leaks or accumulation of water in them ;
(*e*) that the chests when being loaded are carefully handled to prevent injury to them ;
(*f*) that a police constable is told off for duty to each boat from the time the boat begins to take in chests;
(*g*) that no boat leaves the ghât without a police constable on it.
(*h*) that there is no overloading, but that each boat is loaded according to its capacity already approved by the Factory Superintendent.

413. The Assistant supervising the loading of the boats will submit daily to the Factory Superintendent a report (Factory Form No. 88), showing the number of chests loaded on each boat, the hour at which the loading of the despatch began and ended, and such other noteworthy circumstances as may have come under his notice in connection with the despatch.

414. As each boat receives its full complement of chests, the Assistant in company with the Railway Contractor's Agent, the officer of the Factory Guard, and the head-constable on duty, will count the number of chests in the boat. The Assistant will then enter against the number of the boat (in Factory Form No. 89) the number of the chests contained in it, and will obtain in the proper column the signature of the contractor's agent, the Assistant himself signing his name in the column set apart for him. He will then permit the boat to leave the ghât.

At the close of the day's despatch this receipt, with the signature of the contractor's agent at foot for the full number of the day's despatch, will be submitted for the inspection of the Factory Superintendent, and afterwards filed in the office by the Head Clerk.

415. Before the despatches of the season begin, the Factory Superintendent will appoint a temporary or permanent Assistant for duty at Tarighat Railway Station. This Assistant will be deputed on the part of the Factory to see that the contractor's coolies handle carefully the chests, so that no injury is done them, and that the police head-constable on duty details a proper guard over the chests during their transit to the waggons, and after the waggons are locked and sealed.

416. His duties will therefore be to keep a watch over—

(*a*) the landing of the chests from the boats;
(*b*) the loading of the chests on to carts;
(*c*) the transfer of the chests, under proper escort, from the ghât to the railway waggons;
(*d*) the proper and careful locking up and sealing of the waggons before their transfer to the charge of the police guard.

417. He will be assisted in his duties by two permanent or temporary sirdars (one of whom will be a Teli, so as to be able to repair small injuries to gunny covers), and a carpenter. Excepting one sirdar, who will remain at Tarighat all night to guard Factory property, the Assistant and his staff will cross over to Tarighat by the first boat of each day's despatch.

418. Any chests found by the Assistant at Tarighat to be damaged or to show marks of damp on it will at once be returned by him through the contractor to the Factory in charge of a police constable and a sirdar for the necessary repairs or change of gunny cover. With the chest will be sent a short report to the Factory Superintendent giving the number of the chest, the nature of the damage, and how it occurred. Should there be any sign of the starting of a lid or similar small defect needing the hammering in of a nail, it will be done by the carpenter in the Assistant's presence without taking off the gunny cover, or undoing more than a few stitches if found necessary. The number of all such chests will be shown by the Assistant in his daily reports, which he will submit to the Factory Superintendent (Factory Form No. 90).

419. The necessary police guard to be indented for by the Factory Superintendent prior to the beginning of despatches will be:—

(*a*) one head-constable and eight constables to escort and guard the chests from the Factory to the waggons at Tarighat station daily during despatches;
(*b*) one head-constable and eight constables to keep guard day and night over the waggons at Tarighat station while they contain chests and until the train leaves the station;
(*c*) Five head-constables and ten constables to accompany opium trains to Howrah, each train with a 1,000 chests carrying an escort of two head-constables and four constables.

420. When the waggons at Tarighat are filled they will be sealed by the Station-master in the presence of the Assistant. They will also be locked and sealed with the Factory seal, independently by the Assistant himself. The head-constable in charge proceeding to Howrah will grant a receipt (Factory Form No. 91) for the number of waggons and the state of the locks and seals to the Assistant, who will deposit it in the Factory Superintendent's office on his return to Ghazipur in the afternoon. This receipt will also contain a certificate showing the names of the constables proceeding with the despatch with their signatures.

421. While waggons are being filled with chests, and while they are standing at Tarighat Station, after being locked and sealed, they will be guarded by the head-constable and eight constables specially detailed for this duty. This guard will be held responsible for the number of loaded waggons and the condition of the locks and seals until relieved of their charge by the starting of the train.

422. The head-constable on duty with an opium train to ~~Howrah~~ will be held responsible that the locks and seals of every carriage are examined at each station the train stops. Should they on arrival at any station have cause to think any of the locks or seal have been tampered with, immediate notice will be given by them to the guard and Station-master. From the time of the starting of a train till the delivery of the despatch at ~~Howrah~~, the head-constables will retain sole possession of the keys of the waggons.

423. After delivery of a despatch to the officer appointed by the Board of Revenue at ~~Howrah~~, the head-constables will take charge of the locks and keys of their train and will obtain their receipt. They and the constables will then return by the first train to Tarighat to be available for another despatch.

424. On the agent of the railway contractors granting receipt under Rule 414 of this section for the full number of chests delivered at the Factory ghât, the Factory Superintendent is entitled to a railway receipt for the full despatch, as booked from Ghazipur to ~~Howrah~~, payment being made by the Factory Superintendent to the Railway Company by credit note at rates approved by the Board of Revenue. The railway receipt the Factory Superintendent will despatch direct to the address of the Secretary, Board of Revenue, Calcutta.

425. The Factory Superintendent will at the same time submit to Agent, for transmission to the Board of Revenue, the following documents, giving full particulars of the chests despatched to Calcutta:—

(*i*) invoice of chests despatched showing distinguishing marks and the gross weight of provision opium packed (Factory Form No. 92);

(*ii*) certificate as to quality, weight and manufacture of the provision (Factory Form No. 93);

(*iii*) abstract of weighment of the contents of the chests (Factory Form No. 94);

(*iv*) invoice of gross weight of the despatch (Factory Form No. 95);

(*v*) statement showing the despatching charges incurred on the chests shown in the invoice (Factory Form No. 96).

1. PAGE 90, chapter VII, Section IX, Rule 425 :—

Substitute the following revised rule for the above rule :—

"The Factory Superintendent will, at the same time, submit to the Agent for transmission to the Board of Revenue an invoice of chests despatched, showing their distinguishing marks and the net weight of the 40 cakes in each chest, together with a certificate as to the quality, weight and manufacture of the provision (Factory Form No. 92)." 20-11-1902.

CHAPTER VIII.

ABKARI OPIUM.

426. The opium that is manufactured for the excise requirements of local Administrations in British India is known as abkari opium.

427. Before the new season's opium begins to come in, the Factory Superintendent will prepare a forecast of the coming year's requirements from the indents submitted through the Agent by the Board of Revenue or the Commissioners of Excise of the various Administrations that take their opium from the Factory. Having arrived at the exact figure of the abkari requirements for the coming year, he will allow for any balance remaining on hand from the previous year's stock, and will add 10 per cent. as a margin for contingencies, and his issues from the opium of the new season will be based on these figures.

428. Abkari opium will be manufactured at 90° consistence (*i.e.*, between 89·50° and 90·50°), and the opium set aside for it should be as far as possible from that portion of the year's produce which is of too high a consistence to be expended without causing loss to Government in the manufacture of provision cakes. Equal care, however, will be taken that only good opium, free from all impurities, is used for abkari as for provision purposes.

429. Opium for abkari use will be stored in a vat specially set aside for it in the malkhana, and it will be issued by the Assistant Factory Superintendent only under authority from the Factory Superintendent published in the Factory order-book, and in the same manner as opium exported for provision manufacture. The opium on issue from the malkhana will pass directly into the trays in custody of the Assistant in charge of the Abkari Department, who will be responsible for its manufacture and care until it is issued from the Factory in the form of abkari opium. The gross quantity exported and the calculated quantity at 70° and 90° consistences will be debited by the Assistant Factory Superintendent in his Register of Malkhana exports, and the gross quantity received and its calculated equivalent at 90° will be credited by the Abkari Assistant on the "unmanufactured" side of his stock book of abkari (Factory Form No. 97).

430. The method of manufacturing abkari opium is as follows. The opium will first be spread out on wooden trays,* and will there be thoroughly searched by hand by coolies for foreign substances, such as fragments of pottery, &c. The trays will then be laid out, side by side, in an open yard exposed to the sun, where the opium will be frequently stirred with long wooden spatulas, and will gradually under this process part with its moisture. At night the trays will be locked up carefully by the Abkari Assistant, and on damp or cloudy days the drying and manufacture will not be carried on.

* At Ghazipur the trays measure 5 feet by 3 feet, with a depth of 4½ inches, external measurements.

431. Daily in the morning when the trays are laid out in the open the abkari sirdar will go round and examine them, and will pick out such as he thinks have reached the consistence of 90°. The Assistant in charge will examine these trays, and if he considers them to be of the desired consistence, he will have the contents transferred into caking trays and well amalgamated into blocks of about 6 to 8 inches in depth, called "dhundias." This will be done by the opium being scraped together from the different trays and kneaded into a homogeneous mass by the treading of coolies.*

432. The next morning in the presence of the Assistant Opium Examiner one of the permanent Factory parkhias will take samples from the several caking trays by means of an iron scop, penetrating to the bottom of the tray. From each caking tray three or four samples will be drawn, and the samples from every two caking trays will be mixed together with a wooden roller on a board. From the resulting mass one sample of about a chittack will be taken and numbered, the same number being chalked on the two caking trays. When all the samples have been taken, they will be sent to the laboratory in a box of which the Assistant Opium Examiner will have the key.

433. The assay of the abkari samples will be conducted in the same manner as the assay of opium, as laid down in Rules 115 and 116 Section (iv), Chapter IV. The results, with the average of the three specimens from each sample, and the mean average of the various samples, which are declared to be within the limits assigned for 90° consistence, will be recorded in the Register of Abkari Assays (Factory Form No. 98) by the Assistant Opium Examiner, who will sign the register and forward it for the inspection and orders of the Factory Superintendent. The latter officer, if he sees that all conditions are fulfilled, will write on the register his order to the Abkari Assistant for the opium to be converted into abkari cakes.

434. The manufacture of the contents of the caking trays passed by assay will be taken in hand the next morning, and everything conducted in the presence of the Assistant in charge until the chest is nailed down. The opium will first be cut up into small rectangular blocks, which will be brought to the exact weight of one seer each, plus an allowance of 30 grains ;† these blocks will then be shaped by a press in a brass mould into cubical cakes stamped with the Factory mark.

435. As each cake leaves the press, it will be test weighed by itself and will be passed on to a larger test scale. When there are 60 cakes—the allowance for each chest—on the large test scale, they will be weighed against 1½ maunds, plus 2 chittacks oil allowance, and if the weight is found to be correct, the 60 cakes will be passed on to a wooden bench, where each cake will be wrapped in two sheets of Nepal paper, the inner wrapper being smeared with poppy oil to prevent it adhering to the opium, the outer being tied round with string.

436. When the sixty cakes are wrapped up, they will again be put on the scale against a weight of 1½ maunds, plus two chittacks for

* It will be necessary to lubricate the coolies' feet with poppy oil in order to prevent the opium sticking to them.

† The moulds and the coolies' hands will be slightly smeared with poppy oil to prevent the opium adhering. This allowance, which amounts to 2 chittacks in a maund and a half, is intended to represent the oil which thus enters into a chest.

oil, plus a weight roughly equivalent to the weight of the paper and twine; and if this further test weighment is satisfactory, the cakes will be passed into a chest placed in front of the Assistant, bearing on its side the number* of the chest in consecutive series, and the date of packing. The cakes will be packed in two layers of 30 compartments each, a cake fitting exactly into each compartment. Before the cakes of the second layer are allowed to be put in, the Assistant should satisfy himself that each compartment of the lower layer holds a cake. With the last cake of the upper layer the Assistant will place in the chest a ticket (Factory Form No. 99) signed by himself, and giving the number of the chest, the number and weight of the cakes, the date of packing, and the name of the Factory Superintendent.

437. Each chest after being securely nailed down in the presence of the Assistant† will be carried away to the verandah outside, where all its joins and cracks will be carefully covered over with cloth and dammered, and a wire will be passed round the chest and made fast by a leaden seal bearing the Factory mark. In packing a chest the Assistant should be careful that the planks in lid and on bottom of a chest run in the same direction, and that the wire is placed at right angles to the direction of the planks in lid and bottom.

438. When the chests are dammered and sealed the abkari sirdar will carefully examine them all round to see that everything is in order and will chalk-mark each chest, when they will be sewn up in gunny covering, numbered and stacked on wooden platforms well above ground. They will remain in charge of the Abkari Assistant until they are issued from the Factory.

439. During manufacture the Abkari Assistant will keep up his register of packed chests (Factory Form No. 100) by entering in it the date, the contents, the caking consistence and the number, in consecutive series, of each chest packed; and at the close of manufacture he will strike off from the "unmanufactured" side of his stock book of abkari the amount of opium at 90° represented by the number of chests and cakes manufactured, and will credit the latter on the "manufactured" side of the stock book.

440. Abkari issues will be made from the Factory on indents‡ received from the Board of Revenue, or the Excise Commissioners of Local Administrations through the Opium Agent. On receipt of such indents an order for the issue will be sent by the Factory Superintendent to the Abkari Assistant in the abkari order book (Factory Form No. 101) kept in the Factory Superintendent's office. The Assistant will then unstack the chests for issue in the order of their manufacture as shown by his register of packed chests, and will have their addresses marked on them. Before each chest is issued it will be weighed, and its gross weight, date of issue, and destination entered in the proper

* The season to which the opium belongs will be shown on the ticket and on the chest, and a fresh series of numbers will be commenced with each season's opium.

† At the Ghazipur Factory 2½-inch nails should be used for mango wood lids of one inch planking and 2-inch nails for sâl wood lids of ¾-inch planking.

‡ Indents are generally submitted for an annual supply. In the Benares Agency this annual supply is divided into quarterly instalments, so as to ensure, as far as possible, fresh supplies to the districts. The Factory Superintendent manufactures against these quarterly instalments, and supplies as the instalments fall due.

columns of this register; and from this register the Assistant will write up for each issue an invoice (Factory Form No. 102). When the chests and invoice are ready, he will sign the latter, and submit it to the Factory Superintendent's office, where arrangements will be made for the immediate despatch of the chests. The Assistant will then strike off from the "manufactured" side of his stock book of abkari the number of full chests and cakes issued, which will correspond with the number shown in the abkari order book.

441. The Factory Superintendent will on receipt of the railway or carrier's receipt, and the invoice from the Abkari Assistant, sign the latter and forward them both, together with a receipt in triplicate (Factory Form No. 103), to the indenting officer. The latter on receipt of the consignment will sign the receipt form in triplicate, and will return it to the Factory Superintendent.

442. On return of the receipts from the consignees, the triplicate copy will be retained for record in the Factory Superintendent's office, and the original and duplicate will be submitted by the Factory Superintendent to the Agent with his monthly statement of abkari issued. The Agent will file one copy in his office for record, and will submit the original copies as vouchers in support of his statement (Factory Form No. 104) of abkari issues submitted monthly with his cash account to the Accountant-General of Bengal.

443. Before a new season's opium is exported for abkari purposes, the Factory Superintendent should invariably take stock of the "unmanufactured" side of the abkari stock account by having the entire quantity of opium in hand manufactured off if possible. The result of stock-taking should be reported to the Agent, and sanction taken to having the account adjusted, if necessary.

444. In all operations connected with abkari manufacture where poppy oil is used, the special attention of the Assistant in charge is drawn to the necessity of avoiding the accumulation of chips of wood, twine, rags, paper or other combustible material smeared with the oil. All such accumulations are strictly prohibited, as they are liable to induce spontaneous combustion, and the Assistant before closing up his department for the day is directed to inspect all his rooms and satisfy himself that they are kept clean, and that all chips of wood and refuse have been disposed of.

445. The foreign substances found in the opium (*vide* Rule 430 of this section) will be collected by the searchers in small wooden or metal trays, which will be made over to a second set of men, who will carefully scrape off as much of the adhering opium as can be done without abrading the surface of the pottery, &c. This opium will then be put into one of the larger trays, and the foreign substances will be washed carefully in water until all trace of adhering opium has been removed; they will then be collected and destroyed under the orders of the Factory Superintendent. The washings will be collected in glazed earthenware tagars, and will be evaporated until the consistence of about 70° is reached, when they will be assayed, weighed and transferred by order of the Factory Superintendent to the "thick dhoi" account and removed to the lewakhana, appropriate debit and credit entries being made in the books of the Abkari and Lewa Departments.

Page 94, chapter VIII, rule 440—

Substitute the following *for* the words "an invoice (Factory Form No. 102). When the chests and invoice are ready he will sign the latter and submit it" in lines 12 and 13 of this rule :—

"The invoice side of the advice of despatch (Factory Form No. 102), and after signing it will submit the advice." 15.9-1901.

Rule 441—

Substitute the words "advice of despatch" *for* the word "invoice" line 2 of this rule. 15.9-1901.

"442A. A monthly statement showing the quantity of excise opium manufactured at, and supplied from, the factory, shall be submitted to the Board of Revenue in form No. 97A by the first week in each month."

CHAPTER IX.

CONTRABAND OPIUM AND ALKALOIDS.

SECTION I.

Contraband opium.

446. "Contraband" opium received at the factories is illicit opium, confiscated by order of a Magistrate, and declared by the Civil Surgeon of the district in which it is found to be "fit for use," *i.e.*, to have a marketable value.

447. When opium is confiscated by a Magistrate and is declared by the Civil Surgeon to be fit for use, it is sealed up and forwarded by the Magistrate to the Opium Examiner.* The forwarding docket (which will be the duplicate marked B of the form† prescribed for the purpose) will give the weight of the parcel and its contents, the case in which the opium was confiscated, the number of the seals on the parcel, and a *facsimile* of the seal. The label on the parcel will be the triplicate of the form (marked C), and will, besides containing the address, give the number of the parcel, the district from which it is despatched, and the date of despatch, for ready identification with the forwarding docket. The parcel, unless it is too large, will be forwarded by Registered post.

448. Contraband parcels will be received in the Factory Superintendent's office, and if everything appears in order, the Head Clerk will have columns 1 to 5 of the contraband register (Factory Form No. 105) filled in, and the register with the parcels and the forwarding dockets sent to the Assistant Opium Examiner at the laboratory.

449. The Assistant Opium Examiner will examine the condition of each parcel carefully, will weigh it, remove its cover, and ascertain accurately the weight of its contents, filling in columns 6 to 9 of the contraband register. The opium will next be tested by the Opium Examiner in the manner laid down for suspected opium (Chapter IV, Section (v), Rule 133 *et seq.*) The consistence will first be entered in column 10, being determined, at the discretion of the Examiner, either by hand parak or assay. If the opium be of marketable value, even though it be unfit for Factory (lewa or abkari) use, its weight will be entered in column 12; if it has no market value, by being devoid of the chief constituents of opium, its weight will be entered in column 13. The Examiner will then assign the opium to its particular use, at his discretion, by entering its weight in column 14, 15,

* In the North-Western Provinces and Oudh confiscated opium is sent to the Ghazipur Factory.

† This form appears as Appendix No. XLII, page 143, in the North-Western Provinces Excise Manual, and is printed with a blue cross across each portion of it for ready identification. The form is given in the Appendix to this part of the Manual.

or 16, according as he thinks it fit for abkari, lewa, or the extraction of alkaloids; and if the opium be not quite pure, he will note the cause of impurity in column 17 and initial the results of each examination, entering at the same time with his initials the consistence, and the use to which the contents are assigned, on the vessel containing the contents of a parcel.

450. The Assistant Opium Examiner will then remove to the deposit room such parcels as have been declared to be unfit for Factory use, and there they will remain for at least three months before being brought into use for the extraction of alkaloids; and the total weight of these parcels he will enter in column 10 of his stock book of confiscated opium, &c., entering his initials against these parcels in column 18 of the contraband register in token of his having taken charge of them.

451. The parcels set aside for abkari and lewa will be sent by the Assistant Opium Examiner, under safe custody, to the Assistants in charge of those departments, with the contraband register. The Assistants will receive the quantities shown in the columns affecting them, noting the consistences at which the parcels are passed, and will sign in column 18 of the register against each parcel as an acknowledgment, and return the register to the Assistant Opium Examiner. They will then enter in the proper columns of their respective stock books the quantities received, and the calculated quantities at 90° and 52·50° respectively.

452. The examination having been completed and the opium disposed of, the Assistant Opium Examiner will return the contraband register to the Factory Superintendent's office with the forwarding dockets, and the Head Clerk will prepare and submit for the Opium Examiner's signature, for issue, replies embodying the results of examination to the despatching officers (Factory Form No. 106 or No. 107, as the case may be) for each parcel of contraband opium received, entering the number and date of these replies in column 19 of the register of contraband opium.

SECTION II.

Alkaloids.

453. Alkaloids will be extracted from the accumulations at both factories of—

(*i*) dhoi received from the district officers;
(*ii*) confiscated opium, *i.e.*, all opium sent in by district officers, which on examination is found to be so much adulterated as to be unfit for lewa;
(*iii*) burnt opium
(*iv*) contraband opium } when found to be unfit for lewa.

454. All the above descriptions of opium will be shown separately in the several columns of the stock book of confiscated opium, &c., kept up by the Assistant Opium Examiner. District dhoi will be issued for

"457A. A monthly statement showing the quantity of opium, &c., expended in the manufacture of alkaloids at the factory, shall be submitted to the Board of Revenue in form No. 108A. by the first week in each month." 5-6-95.

the extraction of alkaloids as it is required; the rest of the material will only be issued after the expiry of the period prescribed for holding them in deposit, confiscated opium being only utilized after the formal sanction of the Agent has been obtained (*vide* Rule 156, Section (v), Chapter IV). All issues will be shown by the Assistant Opium Examiner in column 13 of his stock book.

455. The alkaloids at present extracted are morphia codeia, and to a small extent narcotine.

As each parcel is prepared and tested, in strict accordance with the most recent scientific processes, it will be accurately weighed by the Assistant Opium Examiner, brought on to his stock book of alkaloids (Factory Form No. 108) and put into earthenware jars, closely corked, and stored away until required for issue.

456. Alkaloids will be issued from the Ghazipur Factory, to the medical store departments of Government, or to private dispensaries on payment, on indents received through the Opium Agent.

Indents from the Government Medical Stores will be submitted by the Surgeon-General with the Government of India through the Board of Revenue. The supply* of alkaloids to private dispensaries will only be directed by the Opium Agent after sanction of the Board of Revenue. On receipt of the Factory Superintendent's order the Assistant Opium Examiner will arrange to issue the required quantities and will write them off his stock books. Before these consignments are packed up, the Factory Superintendent should satisfy himself as to their quality and soundness by personal examination.

457. When alkaloids are issued to any Government medical stores, the value will be adjusted inter-departmentally in the manner laid down in Rule 22, Chapter V of the Civil Account Code.

In the Agent's office the value of the issues will be shown in the list of payments by a corresponding credit in the monthly cash account. The entry in the list of payments will be supported by the invoice receipted by the receiving officer, and the necessary adjustments will be made by the Accountant-General, Bengal.

When supplies are made to private dispensaries or parties, under orders of the Board of Revenue, the value of the alkaloids or opium supplied will be realized in cash and credited in the cash account with full particulars.

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* Powdered opium on payment is also supplied by the Ghazipur Factory to private dispensaries only, with the sanction of the Board of Revenue.

CHAPTER X.

STORES.

SECTION I.

General stores.

458. The Storekeeper will be placed by the Factory Superintendent in charge of all stores received at the Factory, except opium, leaves, trash and chemicals,* and he will be responsible that articles before they are brought on to the books are in sound condition and of the quality required by the department. Articles delivered by contractors or others, if considered by him not to come up to the standard of requirements, should be at once brought by him to the Factory Superintendent's notice. He will be answerable too for the safe custody of all stores while they are in his charge.

459. Stores of European manufacture will be obtained by the Factory Superintendent on indent on the Secretary of State for India, to be submitted annually through the Opium Agent and the Board.

Stores of Indian manufacture will be obtained either by local contract, from the open market or from Government factories. Whenever the stores required are large in quantity, tenders should be publicly invited for the supply, and contracts should be entered into by the Factory Superintendent with the approval and sanction of the Opium Agent.

460. All stores received in the Factory will be weighed or counted and checked with the invoice or indent, as the case may be, by the Storekeeper personally, and then credited in the "day-book of stores received" (Factory Form No. 109), such credits being supported by the indents or invoices duly attested by the Storekeeper in token of the articles having been received. Articles of European manufacture or other valuable stores will on receipt be inspected by the Factory Superintendent, and the cases opened in that officer's presence. Each description of stores will then be credited on its proper page in the store ledger† (Factory Form No. 110).

461. All stores required for Factory use will be issued on indent (Factory Form No. 111), which will be submitted by the officer requiring the article, and passed by the Factory Superintendent. In departments under the Assistant Factory Superintendent, indents should be submitted through that officer to the Factory Superintendent. Stores thus issued will be at once entered in the "Day-book of stores issued" (Factory Form No. 112), and the entries will be supported by the indents, duly

* Cups may, at the discretion of the Factory Superintendent, be placed in charge of another assistant for convenience.

† Articles manufactured at the Factory workshops should be similarly brought on the store books.

endorsed by the officers receiving the articles. On the close of the day the entries made in the day-book of stores issued will be transferred to the store ledger in the same manner as laid down in Rule 460 for stores received.

462. District officers requiring weighment or chemical stores will submit indents in duplicate (Factory Forms Nos. 113 and 114) to the Factory Superintendent so as to reach him not later than 1st October in each year. The Factory Superintendent will check these indents with special reference to the quantity of each article already in stock in the district, and to the reasons for fresh supplies being required. He will pass the indents where he is satisfied as to the necessity for the issue of the articles, and will direct the return to the Factory of such articles as are declared to be unserviceable. Where satisfactory reasons do not exist for the issue of any items in the indents, he will bring the matter before the Agent for orders. All articles issued by the Factory to district officers will be stamped with the date of issue, and will be forwarded under invoice (Factory Form No. 115), which will be signed by the district officer on receipt of the consignment and returned to the Factory Superintendent.

463. Articles of dead-stock which are temporarily required for manufacturing or other Factory operations should be indented for separately. When no longer required, they should be returned to the Store Department by the officer in charge, accompanied by a challan (Factory Form No. 116), which will be submitted through the Factory Superintendent. The Storekeeper will examine the articles, compare the numbers with those in the original indent, and note any discrepancies or damage for the orders of the Factory Superintendent before the articles are brought on to the books.

464. The day-books and the store ledger will be kept up by one of the clerks of the Factory Superintendent's office, and the Storekeeper will daily check each item of receipt or issue with the corresponding invoices or indents, and compare the entries in the ledger with those in the day-books. He will also check the balances of each item in the ledger, and will initial every item of receipt or issue in all three books.

465. The Factory Superintendent will inspect the store books at least once a week, and will check certain items which he will select at random. The Audit Office will check the store books periodically as the Factory Superintendent may direct, with reference to particular articles.

466. The stock of stores will be verified before the 31st of March in each year by an assistant appointed by the Opium Agent. A detailed statement of stores as verified (Factory Form No. 117) will be submitted to the Agent by the Factory Superintendent with a report explaining any increase or decrease as compared with the book balance, and the discrepancies will be adjusted in the manner directed by the Agent.

467. Articles which are found to be unserviceable at the time of verification will be set aside for the inspection of the Factory Superintendent, who will, after inspection, submit a list of such articles to the Agent for his orders as to their disposal by public auction or otherwise and the adjustment of the books.

468. Sales of unserviceable articles will be conducted, after due public notice, by the Storekeeper or an assistant appointed by the Factory Superintendent, and the result of the auction will be shown in a register (Factory Form No. 118), which will be submitted to the Factory Superintendent after each sale. The amount of sale proceeds will be paid by the Factory Superintendent into the Treasury with the usual challan for credit to Government.

469. The following returns in connection with stores will be submitted to the Opium Agent by the Factory Superintendent:—

(*i*) monthly statement showing articles purchased in India (Factory Form No. 119), to be submitted on the close of each month;

(*ii*) estimate of probable requirements of European stores for the next financial year (Factory Form No. 120), to be submitted by 15th June;

(*iii*) indent for European stores (Factory Form No. 121) for the next financial year, to be submitted on 1st November;

(*iv*) annual statement (Factory Form No. 122) of expenditure on stores of European manufacture, to be submitted after close of financial year;

(*v*) annual plus and minus memorandum of dead-stock (Opium Form No. 15), to be submitted after the close of the financial year;

(*vi*) stock-book of dead-stock (A. G. B Form No. 158, new), to be submitted every fifth year (31st March 1891, 1896, &c.);

(*vii*) statement of sale proceeds of unserviceable articles (Factory Form No. 123) when necessary.

SECTION II.

Cups.

470. The receipt and issue of cups will always be under the control of the storekeeper or of a permanent Factory assistant, selected by the Factory Superintendent.

471. Some time in January the Factory Superintendent will submit to the Agent his indent for cups for the twelve months beginning 1st April following. The indent will be framed after due allowance being made for new cups on the books, and the cups saved after packing of the current year's provision. The coming season's manufacture will be taken as the basis for the indent, and two cups will be allowed to each cake to be manufactured, with a margin of 25 per cent. for contingencies, and as a reserve to be carried forward to the following year.

472. The Agent having accorded his sanction to the cup indent, the Factory Superintendent will at once proceed to give out contracts for the supply of the cups, so that as large a proportion as possible may be delivered before the rains set in, the months between March and June being best suited to their manufacture.

473. A permanent list of cup contractors will be maintained at the Factory, and no change in this list will be made except with the authority of the Factory Superintendent.

Before giving out contracts for a new season's supply, the Factory Superintendent will satisfy himself that the contractors are able to do the full work, and he will also revise the list, if necessary, by striking out men whose supplies have not been satisfactory and introducing new men. The names of the contractors and the amount of each contract will be published in Factory orders.

The usual practice is to give out only 50 per cent. of the contracts in the first instance, the remaining 50 per cent. being given later on in instalments, as contracts are completed, to those contractors who turn out the best work at the quickest rate.

474. In the Store Department will be kept for comparison and check a brass pattern cup and a pattern wooden measure, fitting perfectly the inside of the brass pattern cup. Three *facsimiles* of this wooden measure will be supplied for use in the cup department, and to each contractor will be supplied from the cup department one *facsimile* of this measure as a guide to him of the exact requirements of the Factory with regard to the internal shape and size of the cups.

475. Each year, before the season's first contracts are given out, the Assistant in charge will call in from the contractors all their wooden measures, and he will return these, as well as the three in use in the cup department, into store through the Factory Superintendent. The Storekeeper will personally fit each measure into the brass pattern cup to see if the measure is accurate. Any that are worn down by constant use or have lost their shape will be broken up and replaced by new ones, and the newly tested and renewed batch of measures will be returned to the Assistant in charge of the cup department for use in his department and for distribution to the contractors, the Storekeeper reporting the circumstance in his memorandum book for the information of the Factory Superintendent.

476. All the accounts of the cup department, such as the writing up of daily receipts and issues in the stock book, the granting of receipts to contractors, and the making out of contractors' bills will be done in English, and personally by the Assistant in charge. The books and forms to be kept up will be—

Stock book of cups (Factory Form No. 124).
Cup contractors' ledger (Factory Form No. 125).
Receipts to contractors (Factory Form No. 126).

The stock book and ledger will be submitted weekly for the inspection and initials of the Factory Superintendent, and monthly for audit to the Head Auditor.

477. Cups tendered for acceptance by contractors will be stacked by them in fine weather just outside the cup godowns, and during the rains in an empty shed near the godowns. Here they will be parakhed by the Factory cup parkhias under the supervision of the cup godown sirdar. In parakhing cups the following points will be observed:—

(*a*) that they are properly baked;
(*b*) that they are not broken or cracked;
(*c*) that the measure fits each one perfectly.

All cups that have passed the above tests will be stacked by the parkhias in stacks of ten, the stacks being in rows, so that they can be easily counted. Cups regarding which there are any doubts will be set aside for the inspection of the Assistant in charge.

478. When the cups tendered for acceptance have all been parakhed, the Assistant in charge will check the work of the parkhias by first examining the doubtful cups and passing such as appear to him not so objectionable as to render rejection necessary. The rest that are in his opinion unfit to be passed will be broken up in his presence unless the contractor desires to refer them to the Factory Superintendent for his orders. The Assistant will then proceed to examine at least one stack in every ten taken at random from the cups passed as good by the parkhias. As the whole of one contractor's cups are thus examined, the Assistant will have each stack marked in his presence with a stripe of black* paint from the top to the bottom, so that each cup of the stack will retain on its side a black mark about an inch in width and about ½ an inch in depth, as a token that it is the property of the Factory. If due care be taken in the examination, no cup can be tendered a second time for acceptance.

The stacks will then be counted, and the number of cups entered in the ledger against the contractor's name, a receipt in English for the number accepted being given to the contractor. The cups will also be entered in the stock-book and passed into the receiving godown.

479. Contractors' accounts will be submitted by the Assistant in charge to the Factory Superintendent within the first week of a new month, and will include all cups received from the first to the last day of the month preceding.†

The bills of the contractors will be supported by the receipts held by them, and will be audited in the Audit Office before being submitted to the Agent for countersignature and sanction.‡

480. Cups will only be issued from the cup department on indents (Factory Form No. 127) which have been duly signed by the indenting officer and the Assistant Factory Superintendent and countersigned by the Factory Superintendent. The issue of cups on loan, or against future indents, or under any other pretext whatever, is strictly prohibited.

481. Cups for manufacture and sattai, as for cake godowns, will be indented for on the day previous to that on which they are to be used, the indent being made out by the Assistant in charge of the operations or godowns according to authorized§ scale, any excess over authorized scale being explained in the column of remarks. This indent with the countersignature of the Factory Superintendent will be submitted at the cup godowns by the sirdars of the indenting department about 1 P.M.,

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* Paint will be used and not ink or whitewash, as these can be rubbed out for purposes of fraud.

† As contractors, if left to themselves, are in the habit of tendering their supplies in large bulk at the end of a month, the Assistant should endeavour, through his sirdar, to make them distribute their deliveries throughout a month, and so avoid having a larger number than he is capable of examining br ught in at one time.

‡ The present rate of payment at the Ghazipur Factory is 300 cups for the rupee.

§ The authorized scale is as follows:—For manufacture, 10 per cent. in excess of the number of cakes to be manufactured; for sattai, 25 per cent. on the number of cakes to be sattaied; for turning in cake godowns, 350 cups daily to every lakh of cakes in the godown when a fourth of the number of cakes in a godown are turned daily. If it is possible to reduce breakage, the above scale should be correspondingly reduced.

the hour at which the cup department will issue daily. The cup department sirdar, who has his cups ready ranged in stacks of ten, will make over to each sirdar the number shown on his indent. When all the cups are thus counted over, the Assistant in charge will check the issues and make the necessary entries in his books, and the sirdars of the respective departments will then transfer their cups into baskets, exactly 50 cups going into each basket, and will have the baskets carried away.

The indent slip with the endorsement of the indenting assistant on the back, in token of the number of cups shown on the indent having been received, will be filed by the Assistant in charge of the cup department as a voucher in support of his expenditure.

482. During the packing season the issue of new cups from the cup department will entirely cease, the indents of the cake godowns being met from cups being recovered from cake godowns issuing to the scales.

483. At this season the assistant in charge of cups will arrange to have at the issuing cake godowns a staff of beldars and parkhias who will take over the cups as soon as the cakes are removed from them. They will examine the cups and stack those that are perfectly good in stacks of ten; those that are cracked or have small pieces broken off, but are still fit for the use of mature cakes, will be made over for the use of the other godowns on their indents, any deficiency being made up from the stacks of good cups.

484. When the cake godowns have stopped issuing cakes for the day, and the other godowns have received their full complement of cups, the recovered cups will be counted over by the Assistant in charge of the cup department and removed to the cup godowns. He will then bring on stock the total number of cups received (number removed to the cup godowns, plus the number issued to cake godowns) and will make a corresponding debit of the number of cups shown by the indents as issued. With care not less than 75 per cent. of cups ought to be thus recovered for issue.

485. Whether taking over cups from contractors or from cake godowns, the Assistant in charge will be very careful that no cups that have been used for water or have been wet by rain are taken in by him. Such cups, as well as cups that have been used for lewa, should be entirely discarded as having lost their absorbent property. Cups that are slightly wetted by rain might be taken after they are perfectly dry again, but before taking such cups over from contractors the orders of the Factory Superintendent should always be taken.

486. In disposing of broken cups from the cup godowns, the Assistant will have all such as are chipped to the extent of one-fourth only and are fit to hold mature cakes set aside for issue just before sattai and packing at the rate of 10 per cent. on indents. Such issue of broken cups will, however, only be made after the orders of the Factory Superintendent have been taken.

Broken cups unfit for use will be thrown away daily after issues have been completed, but before being thrown away the bottoms will be counted, and the number taken off stock.

CHAPTER XI.

MISCELLANEOUS.

SECTION I.

Temporary Establishments

487. Establishments on daily wages can only be taken on with the previous sanction of the Factory Superintendent on indents (Factory Form No. 128), which will be duly drawn up in triplicate by the assistant requiring them. When a department or godown is under the control of the Assistant Factory Superintendent, the indent will be submitted through that officer.

488. Each department will have its own indent book, and the indents in it will be serially numbered.

After sanction of the Factory Superintendent has been obtained for the entertainment of establishment, the duplicate of the indent will be sent to the Head Auditor for audit of the monthly pay-bills, the triplicate to the mustering officer for mustering the establishment into the Factory, and the original left in the indent book for record.

489. Indents for establishment will on no account exceed the ordinary scale of previous years. To enable this to be clearly seen, the indent will show, side by side, the establishment required and the establishment entertained in the previous year for the same work. If special grounds exist for any increase in the establishment, these will be set forth in the remark column of the indent, and the Factory Superintendent will pass his orders after enquiring into the matter.

490. When a cooly or artizan is engaged for the first time on the temporary establishment, he will be furnished at the muster by the sirdar of his department with a metal ticket before he is permitted to enter the Factory. These tickets will denote by their shape the daily pay of the workman, and will have impressed on them the distinctive mark of the department and the number of the workman on the attendance roll.

491. The tickets for ordinary coolies will be of the following descriptions:—

		As.	P.	
Semicircular, tin, to denote pay of	...	2	6	a day and above.
Oval, tin,	,, ...	2	0	,,
Diamond, tin,	,, ...	1	9	,,
Round, tin,	,, ...	1	6	,,
Hexagonal, tin,	,, ...	1	3	,,
Triangular, tin,	,, ...	1	0	,,

The tickets for cake-makers will be round, well finished and of zinc. Those for artizans, such as carpenters, blacksmiths, &c., will be oval, well finished and of zinc.

492. On first appointment of temporary establishments, assistants will invariably give the preference to men who have worked in the department in previous years. Only when there are no more old hands forthcoming will new men be engaged, unless valid reasons exist for passing over the claims of older hands.

493. In every department there will be an attendance roll of the workpeople (Factory Form No. 129), wherein will be entered the name of each person employed on the temporary establishment, his caste and his village ; and each person will also have a serial number in the book.

494. A workman who has once been taken on the temporary establishment can only be dismissed by the Assistant in charge of the department on reduction of establishment; but should the Assistant desire the dismissal of any one working under him for any other reason, he will report the case for the orders of the Factory Superintendent, or of the Assistant Factory Superintendent in departments under that officer's immediate charge.

495. It is not necessary that any lengthy report should be made when an Assistant desires the dismissal of a temporary hand in his department. It will be sufficient if the name and number of the person and the fault he has committed be entered in the memorandum book of the department, and submitted to the Factory Superintendent, or to the Assistant Factory Superintendent, as the case may be, who will investigate the case at once and pass orders.

496. An Assistant is not permitted to allow any workman under him to leave the Factory after he has once been mustered in, or until the proper hour for closing work. If urgent leave be required by any temporary hand during the day, the matter will be brought before the Factory Superintendent, or the Assistant Factory Superintendent, as the case may be, who will enquire into the case and grant the leave if he thinks fit.

497. A board will be hung at the main gate, whereon will be affixed the names of all persons dismissed for theft of opium and other serious offences, and who have been declared unfit to be again employed in the Factory.

The guard will be held responsible that such persons are never admitted into the Factory, and the Assistants and sirdars of departments that they are never employed under them.

A copy of the list of bad characters with the Factory Superintendent's signature will be kept for information in the Factory Superintendent's office.

498. It is strictly prohibited to employ Factory servants for private purposes. This does not affect the employment of Factory artizans who undertake private work, on their own terms, during hours they are not employed at the Factory.

499. Assistants in charge of departments will be held responsible that no children, or infirm men and women, who are physically unfit for work, are employed under them.

Women with children in arms should be excluded from all departments working in opium. This objection does not apply to the trash and leaf departments, provided the women give their full tale of work.

SECTION II.

Mustering.

500. One Factory assistant (generally the last in seniority) will be told off as the mustering officer, and he will muster the coolies and other workpeople by enumeration only, every morning before work begins.

501. The mustering time will be half an hour before work begins at the Factory, *e.g.*, if work begins at 10 A.M., the mustering officer will begin to muster the coolies and workpeople (who have already assembled in the space allotted for the purpose) at 9-30 A.M. At the latter hour a bell will be rung and the outer gates will be closed.

502. The mustering will be done in the open space between the main gate and the road on the west side of the Factory, and in this space the workpeople will be arranged by the sirdars of the godowns or departments to which they belong in lines two deep for facility of enumeration.

503. The mustering officer will be guided as to the number of coolies of each department to be admitted into the Factory by the indent slips which have been drawn up by the Assistants in charge of the several departments and submitted with the countersignature of the Factory Superintendent to the mustering officer on the day previous to the first entertainment of, or increase in, establishment.

504. As the coolies of each godown or department are drawn up, the sirdar in charge will provide each person with a metal ticket bearing the distinctive mark or number of the godown or department and the serial number of the cooly.

505. The sirdar having drawn up in order the workpeople of his department and ascertained that each person has a metal ticket, the mustering officer will count them, inspect the tickets, and enter the number present in the Factory muster roll (Factory Form No. 130). Those coolies working in the Factory proper will then be passed through the main gate, while those working in the Leaf Compound will be passed through the Leaf Compound gate, each person showing his metal ticket to the sentry as he passes through. The sentry will not permit any person without a ticket to pass through.

506. After the first musters have been completed, and the coolies and workpeople passed through into the Factory proper and Leaf Compound, the outer gates will be opened, and those who are late or are seeking to fill vacancies will be admitted.

507. At the hour fixed for work to begin, the late arrivals will first be mustered, their names taken by the sirdars of their respective departments, initialled by the mustering officer as correct, and submitted by him to the Assistant who keeps the attendance roll of the department to which the person belongs, to be entered in the attendance roll for a fine of three pies each person.

508. The mustering officer will then proceed to fill up vacancies in the several departments with the help of their respective Assistants or sirdars, see that metal tickets are properly distributed, and pass the rest of the people into the Factory in the manner described in Rule 505.

509. The workpeople having got to their respective departments will be drawn up in line by the sirdars for the Assistants in charge of

departments to muster them by name, and to enter the fact of their presence in the attendance roll of the department. A similar attendance roll in Hindi will be kept up by the sirdar of each department or godown.

510. The English attendance rolls are to be written up every morning before commencement of work by the Assistants in charge of the several departments from their *bonâ fide* observation. The practice of copying into the English attendance roll, from the sirdar's roll, or at his dictation, is strictly forbidden. Nor is mere enumeration sufficient. Every cooly's name is to be called out, and the Assistant will see that the person answering to a name is really the one whose name is on the list. On completion of the roll-call the Assistant and the sirdar will each in his own book enter at the foot of the day's column the total number of workpeople present, and will initial the entry. The totals in the two attendance rolls should tally with each other and with the total in the day's Factory muster roll.

511. A similar muster to that described in Rule 510 above will be made by the Assistant in charge of a department immediately before he closes work for the day. This will act as a preventive against people being locked up in godowns for the night, as occasionally happens from want of due care in taking the evening musters.

512. On rainy mornings Rule 507 will be so far relaxed that late arrivals up to 10 A.M. (and correspondingly when the Factory opens at a different hour) will not have a fine inflicted on them. The approval of the Factory Superintendent must, however, first be obtained.

513. Every evening as the workpeople of each department are mustered out of the Factory, the sirdar of the department will collect the metal tickets from them, and deposit them in the place specially set aside for the purpose.

The name of every person who is without a ticket will be taken down, and the following deductions will be made by the Assistant in charge of each department at the end of the month from the pay of workpeople who lose their tickets:—ordinary tin tickets, one anna each; well finished—four annas each. These sums will be entered in the fine column of the pay-bills.

514. The mustering officer, after he has filled up the Factory muster roll in the morning, will circulate it among the Factory Assistants under whom the workpeople are employed.

Each Assistant on receiving the Factory muster roll (having previously in accordance with Rules 509 and 510 mustered by name all his workpeople) will certify, by his initials against his department on the margin of the document, that the numbers of men, women, and boys entered thereon as working under him that day are correct. He will then without delay pass the paper on to the next Assistant.

515. The paper will be finally returned to the Factory Superintendent's office through the Assistant Factory Superintendent, who will initial it after examination of the figures shown against the departments for the working of which he is answerable. It should reach the Factory Superintendent's office not later than 2 P.M. when work begins at 10 A.M., or 10 A.M. when work begins at 6 A.M.

516. The original will be filed in the Factory Superintendent's office for the purpose of checking attendance rolls and pay-bills of

establishment by the audit branch. A copy made in the Factory Superintendent's office will be submitted daily to the Opium Agent for information.

517. In the malkhana and the several sections of the caking and packing operations which are directly under the Assistant Factory Superintendent that officer will allot the attendance rolls of the workpeople of the various sections to the several Assistants, permanent and temporary, placed under his orders. This will not in any way relieve him from the responsibility of seeing that the attendance rolls of the establishments under his control are being kept up strictly according to rule.

518. For purposes of control the Factory Superintendent will periodically and without warning inspect the attendance rolls of all departments and godowns, and satisfy himself that the work of mustering is being properly performed. The Audit Office should draw the attention of the Factory Superintendent to the attendance rolls of any department which do not bear his checking initials for two consecutive months; and also to any irregularities, such as omissions of daily totals, initials of Assistant, &c.

519. The Assistant Factory Superintendent will similarly keep an efficient control over the musters of all departments for the working of which he is answerable. He should without warning inspect and initial the attendance rolls of each of his subordinate departments about once a week. The Audit Office will bring to the notice of the Factory Superintendent the attendance rolls of any department under the Assistant Factory Superintendent which do not bear that officer's checking initials at least twice during the month.

SECTION III.

Payments to temporary establishments.

520. All Assistants in charge of departments will submit to the Head Auditor the pay abstracts (Factory Form No. 131) in triplicate of their workpeople, with the attendance rolls and certificates of undisbursed pay (Factory Form No. 132), not later than the first working day in the following month. The pay-bills of departments or godowns, for the working of which the Assistant Factory Superintendent is answerable, will be submitted to the Audit Office through that officer, who will affix his signature to every bill.

The Audit Office will give preference to these pay-bills before all other ordinary current work in order that all payments to temporary establishments may be completed within a week from the date of receipt of the bills.

521. These bills when received in the Audit Office will be checked with the indents sanctioned by the Factory Superintendent and with the attendance books. The daily and monthly totals shown in the attendance registers will be checked, and the daily totals compared with the totals given in the Factory muster roll. The amounts of the bills as passed by the Audit Office will be stated in words as well as in figures in all the copies. The bills will after check be attested by the Head Auditor and forwarded to the office of the Factory Superintendent, and the attendance books will be returned to the several Assistants concerned.

"Close the attendance rolls on the 16th and on the last working day of the month, and will." 4-10-95.

"16th of the month and the." 4-10-95.

"Bi-monthly." 4-10-95.

522. The Factory Superintendent will after examination countersign each bill, and have the contingent bill in prescribed form prepared in his office. This he will submit to the Accounts Office with the Factory Assistants' bills in duplicate, as vouchers in support of the amounts charged in the contingent bills. After audit and countersignature by the Opium Agent, the contingent bills will be forwarded by the Head Accountant to the treasury for payment.

The Factory Superintendent as the disbursing officer will endorse the original of each such contingent bill as having received the contents.

523. The Factory Superintendent will then sign a pay-order on the duplicates of the pay abstracts, naming the Assistant to whom the amount of each bill is to be paid by the treasurer. In the case of bills from departments, for the working of which the Assistant Factory Superintendent is answerable, the pay-orders will be in the name of that officer, who will if necessary, and on his own responsibility, re-endorse such bills as payable to any other Assistant, permanent or temporary, subordinate to himself. The treasurer will on such re-endorsement pay the amount of the bill to the Assistant named.

524. The Assistant authorized to receive the amount of the pay-bill of any department under Rule 523 will appear in person at the treasury and receive payment. The treasurer is strictly prohibited from paying out such amounts except to the Assistants named, who will on receipt of the amount sign acknowledgment on the back of the bill. He will also sign against the item in the register of payments kept at the treasury for the purpose (Factory Form No. 133).

525. All payments to temporary establishments must be made in the presence of the Assistants in charge, and be attested by them. As each person on his name being called out comes up for payment, he will show his metal ticket to the Assistant, who, being satisfied as to the person's identity, will make the payment and will put his initials in the attendance roll against such payment.

526. Undisbursed balances from the pay of temporary establishment will not be kept either with the Assistant or the sirdar, but will be lodged with the treasurer in the treasury, after the day's payments have been completed, or if the treasury is closed, in the iron safe in the Factory Superintendent's office.

527. A register will be kept at the treasury (Factory Form No. 134) in which all deposits on account of undisbursed pay will be entered. Both the treasurer and the Assistant depositing the money will initial every such entry in the register in each other's presence. When the money is withdrawn the Assistant will again affix his initials and the date in the column of withdrawal. This register will be inspected and initialled daily by the officer in charge of the treasury.

528. A similar register will be kept in the Factory Superintendent's office, and a like procedure to the above will be followed when undisbursed pay is deposited in the Factory Superintendent's iron safe, with the difference that the Head Clerk will grant receipt for sealed bags only and their weight, and not for the actual amount deposited. The Head Clerk of the office and the depositing Assistant will sign the register, and the latter will sign and date it again when the money is

withdrawn. This register will be inspected and initialled by the Factory Superintendent daily.

529. In all cases of undisbursed pay being lodged in the treasury or in the Factory Superintendent's safe, the depositing Assistant will pay the amount or hand over the sealed bag with a challan (Factory Form No. 135) duly attested by himself. This challan, with the treasurer's or Head Clerk's signature in proper column, will be retained by the Assistant as a receipt from the treasury or the Factory Superintendent's office for the money deposited by him.

530. Before withdrawal of the money or the sealed bag, the treasurer or the Head Clerk, as the case may be, will see the penultimate column of the challan as well as his own register duly signed by the withdrawing Assistant. In the case of departments for which the Assistant Factory Superintendent is answerable, the signature of the depositing Assistant in column 5 of the challan will be supported by the initials of the Assistant Factory Superintendent. Similarly, in cases of withdrawal, the Assistant Factory Superintendent will support it with his initials as authority for the withdrawal. Without this support the treasurer or Head Clerk is prohibited from accepting or repaying undisbursed balances of pay of departments under the Assistant Factory Superintendent.

531. When pay is being disbursed in departments under the Assistant Factory Superintendent, that officer before closing office for the day will satisfy himself as to the progress of the payments and as to the undisbursed balances of the day having been duly deposited in the treasury or in the Factory Superintendent's safe. As the Assistant Factory Superintendent is held personally responsible for all monies which are made payable to him for disbursement, he should not leave the Factory until the challan book duly receipted by the treasurer or the Head Clerk has been received back, in token of which he should place his initials and the date in the remarks column of the challan book. These books will be kept in the custody of the respective Assistants responsible for payments, the Assistant Factory Superintendent retaining the book for the departments under his control. They should be submitted weekly for the inspection of the Factory Superintendent when payments are in progress.

532. Undisbursed balances of pay remaining at the end of a month will be deducted in gross from the pay-bill of a department of the following month. Such undisbursed balances must be shown in detail in the certificate which each Assistant must attach to every monthly pay-bill of his department.

Should the workpeople, whose pay has been thus deducted and credited into the treasury, appear at any subsequent time, supplementary bill will be made out and submitted at once by the Assistant in the usual way through the Audit Office for countersignature of the Factory Superintendent and payment of the amount under the rules of the Account Code.

533. Each department will have a fine-book, and all fines inflicted on workpeople, together with the reasons for such fines, will be entered by the Assistant in the fine-book, and submitted for the approval of the Factory Superintendent. The fine-books of departments and

"First." 4-10-95.

"The second." 4-10-95.

"For the month." 4-10-95.

"Bi-monthly." 4-10-95.

godowns, for the working of which the Assistant Factory Superintendent is answerable, will be submitted through that officer. These fine-books will be forwarded to the Audit office with the pay abstracts.

534. There will be a fine column in the attendance roll, and also in the pay-bill abstract of temporary establishments, and all fines will be entered in detail against the respective names in the former, and in gross in the latter. The amount drawn from the treasury will be the amount of wages less the fines, and the payment to individual workmen will be the amount of wages earned less fines inflicted, as shown in the attendance roll.

535. The temporary workpeople at the Factory, although on daily wages, are paid monthly; Sunday is therefore allowed them as a holiday on full pay. To prevent abuse of this privilege no person will be permitted to draw the pay for a Sunday who is not borne on the muster rolls of the Factory for at least five* out of the six days immediately preceding. A holiday published in Factory orders, even if the coolies, according to rule, are not paid for that day, will be accepted as one of the five days when calculating wages for Sunday.

536. Assistants in charge of departments will be held strictly responsible that sirdars and others working under them make no deductions from the pay of workpeople inside the Factory on account of loans, or other private account.

SECTION IV.

Search.

537. Admittance to the Opium Factory is strictly prohibited except to those working there or having business to transact with the Factory Superintendent, and to those who have the permission of the Factory Superintendent or the Opium Agent to view the place.

538. All persons leaving the Factory will be searched, with the following exceptions:—

(*a*) gazetted officers;
(*b*) persons resident in, or visitors to, the house of the Factory Superintendent;
(*c*) persons who have the permission of the Agent or the Factory Superintendent to visit the place.

539. The following officials are also exempted from search at the will of the Opium Agent or Factory Superintendent:—

(*a*) superior non-gazetted officers;
(*b*) clerks and mohurirs of the various offices working within the Factory;
(*c*) the treasurer;
(*d*) the head sirdar;
(*e*) the two permanent parkhias;
(*f*) the dispensary compounder or native doctor.

540. Only the main gate and the leaf compound gate of the Ghazipur Factory will be kept open for ingress and egress of employés.

* On first entertainment of establishment, if there are less than five days preceding the first Sunday, wages for that Sunday will be allowed if a workman has been present on every one of the preceding days.

The other outer gates will be kept locked, unless, for special reasons, the Factory Superintendent orders them to be opened.

A duffadar of the guard must, however, be present as long as such gates are open, to prevent their being used for any other purpose, but the special one for which they were opened.

541. The inner gate leading from the Factory into the leaf compound will be opened to allow officers to pass through, but no employé not mentioned in Rules 538 and 539 will be allowed to pass in or out of this gate, unless he is provided with a leaf compound pass.

542. Employés passing from the Factory into the leaf compound with a pass, as described in Rule 541, will be invariably searched by the sentry at the gate.

The search, however, is not necessary for those passing from the leaf compound into the Factory, but it is necessary that such persons should show their pass.

543. The leaf compound pass will be a metal one and well finished, so that it cannot be counterfeited easily. Only a fixed number will be struck, and they will be distributed among the several Assistants, who will issue them, as occasion arises, to their workpeople. They will be careful that the passes are deposited under lock and key in their own charge when no longer required.

544. At the hours when workpeople are leaving the Factory in large numbers, *e.g.*, at 4 P.M., when the Factory is closing, and at 9 A.M., or breakfast time, during the manufacturing season, there will be at the main gate for supervision of search: —

(*a*) the Sub-Inspector of the Factory Guard, or in his absence the jemadar;
(*b*) one Factory Assistant (according to roster);
(*c*) a duffadar;
(*d*) four burkundazes.

And at the leaf compound gate—

(*a*) the jemadar or naib jemadar;
(*b*) a duffadar;
(*c*) two burkundazes.

545. The following mode of search* will be employed: —

(*a*) all puggris and dhoties will be opened out and shaken;
(*b*) the armpits will be carefully noticed. Sufficient indication will be given by the men themselves, when shaking their clothes, whether they carry their arms naturally or hang them suspiciously;
(*c*) suspicious appearance in any other part of the workman's person should be examined in the guard-room, in the presence of one officer and one burkundaz or constable.

546. No male is to search a female. Female searchers for females will be stationed at the three following posts: —

(*a*) main gate;
(*b*) the leaf compound gate;
(*c*) the inner gate leading into the leaf compound.

* The officer in charge of the guard should fully explain these orders to his men on parade.

547. There will be two female searchers attached to each post, relieving each other every 3 hours, from 6 A.M. to 6 P.M., or such time as the Factory closes for the day.

548. The female search will be conducted behind a screen wall near the gate. Females are on no account to be taken into any enclosed place for search.

549. Female searchers will be changed from one post to another, without warning, by the Sub-Inspector of the guard, at least once a week; and a statement of such changes will be submitted weekly by him to the Factory Superintendent.

550. The exit of the workpeople will commence not more than half an hour before the time fixed for closing the Factory, and not before 9 A.M. for breakfast, when work begins at 6 A.M.

551. The workpeople of each department will be accompanied to the exit gate by at least one sirdar of the department, who will be held responsible that the men are passed out in an orderly manner. He will also be held responsible that his workpeople are not brought up to the gate while those of another department are being passed out.

552. Whenever opium or any other property, supposed to be the property of Government, is found on the person of any one leaving the Factory, who cannot show a duly signed pass for the same, he will be detained by the guard at the gate, and the matter at once brought to the notice of the Factory Superintendent, who will direct the course to be adopted.

553. Should suspicion attach to any employé included in Rule 539 of having in his possession opium or other Factory property, the officer of the guard on duty at the gate will detain such employé, and report his grounds for suspicion at once to the Factory Superintendent, and that officer will have a search made in his presence, if he considers such warranted by the circumstances before him.

554. Search at the gate is not to be made so as to offend in any way the prejudices of the people being searched. The senior officer of the guard and the Assistant on duty at the gate will be held responsible that search is made effectually, yet not offensively.

555. All sweepings, broken cups, &c., which are usually taken out of the Factory, will be passed out of the gate (near the pump at Ghazipur) at 3 P.M. daily, in the presence of a duffadar and one Assistant (according to roster), each basket of such rubbish being first emptied out and examined in the presence of the Assistant and duffadar.

556. Broken pottery from challan jars will be taken out by the gate in the dhoi yard at 12 noon daily during the season, when challan jars are being washed, in the presence of the Assistant in charge of the lewakhana and a duffadar, each load being carefully examined to see that the pottery has been properly washed.

557. In godowns where opium is stored, such as cake godowns, the malkhana, the lewakhana, and the abkari department, cooly mates will be stationed at all exit gates of the godown or department, and no cooly will be permitted to pass out during working hours, except with the permission of the sirdar; but before passing out the man will be searched by the cooly mate.

558. If opium is found in the search at the main gate on the person of any one belonging to one of the above departments, the sirdars and the cooly mates of the department will be held answerable.

With a view to efficient control under this head, a list of cooly mates at the several entrances to a department where opium is stored will be daily written up by the Assistant in charge.

559. Chuprassies, duftries and servants of this class employed in the offices, whose duties do not take them beyond the offices, need not be searched, unless they have been found straying into the Factory buildings, or the officers at the gate suspect them of having opium or other Government property in their possession.

The officers at the gate are, however, empowered to search servants of this class, occasionally and without warning, even should there be no suspicion attaching to them.

SECTION V.

Locking-up of Opium Buildings.

560. All buildings in which opium, in any state, is stored will have one main entrance which will be double-locked from the outside with two Chubbs' padlocks with duplicate keys.

561. The two Chubbs' padlocks of each building will be stamped at the back with the letters A and B, and the distinctive mark of the building immediately below; thus, for No. 1 Cake Godown $\frac{A}{1}$, $\frac{B}{1}$; for the malkhana $\frac{A}{M}$, $\frac{B}{M}$; for the Abkari Department $\frac{A}{Ab}$, $\frac{B}{Ab}$; and so on.

562. The two keys of the A series of locks will be thus distributed:—

One key with the Assistant in charge of the department.
One key in the Factory Superintendent's key-box.

The two keys of the B series of locks will be kept—

One by the head sirdar of the godown.
One by the Factory turnkey.

The object of the above distribution is two-fold: *firstly*, that the Factory Superintendent and the turnkey, both being on the spot, can open any building in case of accidents after working hours; *secondly*, that no building can be opened without the presence of an officer and a native subordinate, thus acting as a check on the possibility of buildings being opened for illicit purposes.

563. All other doors and openings in the buildings, such as windows, sky-lights, &c., will be locked from inside with ordinary iron padlocks. These iron padlocks will be arranged by the Store keeper in sets, so that all the locks in each set may be opened by one key; and each set with all its keys will be marked with a distinctive mark.

564. Iron padlocks supplied to a building where opium is stored will be issued from the stores in sets. Only when the number in a set

is insufficient, will those of another set be issued. All the inside locks would thus be opened by one or, at most, two keys.

565. All keys which are not in the possession of the Factory Superintendent, or the Assistants in charge, or the head sirdars of departments, will be in charge of the turnkeys of the Factory, who will lock and unlock buildings with their own hands, and will lodge the keys when not required in the proper key-box near the treasury guard. The keys of these key-boxes will, at the close of the day's work, be securely lodged by the duffadar on duty at the Factory Superintendent's house, where they will be kept in a secure place till next morning.

566. Only the permanent turnkeys will have charge of the keys of the buildings in which opium is stored, and if there is more than one permanent turnkey, these buildings will be divided off between them for convenience.

567. Neither the keys of the Factory buildings nor the keys of the key-boxes near the treasury guard will on any account be taken outside the Factory by the turnkeys.

The guard on duty at the treasury and the main gate will be held responsible that this order is strictly attended to.

568. In locking up cake godowns, the Abkari and Lewa Departments, and the Store Department, the Assistant in charge will, in company with one of his sirdars, examine every door, window, and skylight, and satisfy himself that all inside locks are securely fastened. He will then lock the main entrance in company with the turnkey.

In locking up the malkhana and alligation room and the caking room, when opium cakes or provision chests are stored in them, the Assistant Factory Superintendent, who is in charge, will be accompanied by a duffadar, who will go round to each door and satisfy himself that all the locks are securely fastened.

569. Assistants in charge of departments containing opium or stores will on no account entrust their keys to their sirdars or others for the purpose of opening or closing their several godowns or departments, but the main entrance of all such godowns and departments will be locked and unlocked by Assistants personally.

In case of illness or inability to attend the Factory, the key should be sent under a sealed cover to the Factory Superintendent, who will issue the necessary orders for the opening or closing of the department concerned.

570. After the Factory is closed for the day either the Jemadar, or the Naib Jemadar accompanied by a duffadar (according to roster) will—

(*i*) visit each godown and examine the outside locks;

(*ii*) walk over the pucca roofs to see that no workmen of the Public Works Department or others are left on them before the gates leading into the square are locked for the night;

(*iii*) deposit under charge of the sentry at the main gate any ladders used by the Public Works Department which may be left about the Factory.

571. The senior officer of the guard, who goes on the above round of duty, will submit personally to the Factory Superintendent in the evening a report of his examination into the security of the Factory.

A similar report, after personal examination, will be made by the senior officer of the guard present personally to the Factory Superintendent every morning throughout the year soon after sunrise.

SECTION VI.

Fire-brigade.

572. The Engineer has immediate control of the firemen, has charge of all fire-engines, extincteurs, and their appurtenances, and is responsible for the proper working of the pumping-engine and pumps, and the laboratory boiler.

573. The fire-brigade will consist of 48 firemen and 3 khalassies, and will be divided into two sections, each consisting of one khalassi and 24 men. A fresh section will come on duty at 8 P.M. daily, will remain on duty at the quarters provided for them outside the main gate of the Factory until work begins again the next day. During working hours both sections will be employed in their different departments throughout the Factory, and at 8 P.M. the relieving section will come on.

On Sundays the section that has been on duty the previous night will be relieved at 6 A.M., and will again come on duty from 12 noon to 8 P.M.

574. The firemen will be selected from the able-bodied cooly establishments of the Factory by the Factory Superintendent himself, preference being given to those men who have their homes near the Factory. These men will be paid an allowance at the rate of Re. 1 a month for this duty, and will in addition be always employed in the cooly establishment of one or other of the departments of the Factory in preference to others.

575. The Engineer will keep a muster roll of the men for night or Sunday duty in their sections, and will muster his men at every relief and once between 4 P.M. and 8 P.M.

The firemen will also be visited every night by the officers visiting sentries. It will be sufficient for the officer to count the men, and only in the case of any being absent should he wake them and take the muster.

In case of sickness or leave, the Factory Superintendent on the report of the Engineer, will fill up the temporary vacancies.

576. The firemen will be drilled regularly once a week at the hand-engines and extincteurs, serving out hose, helping with ladders, buckets, &c., and once a month at the two steam-engines, which should be worked alternately. The Engineer will be held responsible that every member of the Brigade understands all the details of the work except the actual engine-driving. Besides, each section should be so

trained that each man in it knows thoroughly the special work that would be allotted to him in case of a fire, and when the alarm is sounded he should fall in at once to his special duty.

577. The steam fire-engines will always have fuel ready in the fire-box and water in the boiler, so that in case of an emergency no time will be lost in getting up steam. The engine lamps will always be kept trimmed and on the engines, so as to be ready for use at a moment's notice.

Each khalassie as he comes on his tour of duty will inspect the fire-box, boiler and lamps, and will report to the Engineer as to their condition.

578. All the reservoirs in the Factory will be consecutively numbered. The Engineer will inspect them every morning to see that they are full, and will at once bring to the notice of the Factory Superintendent any leakage he may discover in any of them. The steam pumps will be worked whenever it is necessary to supply the reservoirs or any department of the Factory with water.

With proper care it should not be necessary to work them for more than an hour or two every day during the busy season, or for the same period every second or third day during the slack months.

579. In the event of a fire breaking out in the Factory or its vicinity, the Engineer will at once cause the alarm bell at the main gate to be rung continuously until the Fire Brigade with their engines and appliances had assembled. All Assistants and other permanent employes, who may be on the spot or in the neighbourhood, will be expected to answer the alarm and to assist to the best of their power in extinguishing the fire.

580. The extincteurs will be numbered consecutively, and as a safeguard that they are all in good working order, one of them will be worked, in rotation, every three months in the presence of the Factory Superintendent. The extincteur will then be thoroughly examined, and re-charged if it is found not to need any repairs.

581. The Engineer will on no account leave the station without first obtaining the permission of the Factory Superintendent. Such permission will only be given when there is a Factory Assistant on the spot with sufficient mechanical knowledge to work the engines.

582. Every Monday morning the Engineer will submit to the Factory Superintendent a report (Factory Form No. 136) on the working of his department. The report will contain information on the following points:—

(*a*) condition of the fire-engines and their appurtenances, and the repairs (if any) done to them during the week;
(*b*) attendance of the firemen;
(*c*) weekly drills;
(*d*) condition of reservoirs;
(*e*) condition of the pumps, and the pumping and laboratory engines.

This report does not do away with the necessity of submitting reports during the week, if special circumstances call for them.

SECTION VII.

Factory Guard.

583. The sanctioned* permanent strength of the establishment at Ghazipur is as follows:—

1 Sub-Inspector on	...	...	Rs. 30 per mensem.	
1 Jemadar	...	...	„ 20 „	
1 Naib Jemadar	...	...	„ 15 „	
1 Duffadar	...	...	„ 10 „	
1 Ditto	...	...	„ 9 „	
2 Duffadars	...	...	„ 8 „	each.
25 Burkundazes	...	...	„ 6 „	„
35 Ditto	...	...	„ 5 „	„

584. The officers and men of the Factory guard will furnish the following securities in money, which will be deposited by the Factory Superintendent in the local Savings Bank:—

Sub-Inspector, Jemadar, and Naib Jemadar	...	...	Rs. 100	each.
Duffadars	...	...	„ 50	„
Burkundazes	...	...	„ 20	„

These securities must be deposited by the men within a month of their being permanently appointed.

A member of the force wishing to resign his appointment must give one month's notice in writing to the Factory Superintendent, otherwise he is liable to have his security money forfeited, and on this condition all appointments are made.

585. The duties of the Factory guard have special reference to the protection of the Factory—

(*a*) against burglaries and thefts;
(*b*) against fire.

586. The Sub-Inspector is in general charge of the guard, and his duties are to see to the thorough efficiency of the force as regards—

(*a*) drill and general appearance;
(*b*) knowledge of sentry duty with special reference to Factory rules;

and he is responsible that all the rules relating to the guard, and to the security of the Factory, are strictly carried out.

587. Instruction in drill will be limited to ordinary company drill, and the officers subordinate to the Sub-Inspector will take in rotation their turn in instructing the men.

Efficients to keep up their knowledge will be required to put in two drills in the month. Recruits should fall in once a week, or oftener if necessary. Drill hours will be from 6 to 7 A.M. on Mondays and Wednesdays throughout the year.

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* The sanctioned strength is fully taken up with daily sentry duties without a man to spare: accordingly four temporary men, on Rs. 5 a month each, are entertained all the year round to enable the permanent men to take privilege leave, and to fill up vacancies on account of sickness, &c., not more than four men being absent at a time.

FOOTNOTE.—" Reservists of the Native Army are exempted from furnishing the usual security of Rs. 20 before their appointment as guard burkandazes at the Ghazipur factory." 11-1-95.

588. The Sub-Inspector will notify to the Factory Superintendent any vacancies existing in the force either from sickness, leave, or dismissal; and all such vacancies, whether permanent or temporary, will be filled up by direct authority of the Factory Superintendent and after his personal inspection of the candidates.

589. A sentry, before taking over his post, will examine the locks on all gates and buildings within his post, and at once bring to the notice of the duffadar of the relief any irregularities he may notice.

590. A sentry, once posted, will on no account leave his post until properly relieved.

He is not to lounge against sentry-boxes, walls or any other support, but to be always on the alert, and to walk briskly up and down at his post, halting only for a few minutes at a time.

During the heat of the day and during rain a sentry may take advantage of his sentry-box, or any shade within his post, but when halted he must stand properly "at ease."

591. The hours for relief of sentries are 3, 6, 9 and 12 o'clock during the day and night.

The Sub-Inspector will be held responsible that every man in the guard force takes his regular turn of duty according to roster; that no sentry is posted to the same post twice in succession; that the post a sentry is to get is not known to him beforehand; and that a record is kept up regularly of all postings for reference if necessary.

592. Property of any description being taken out of the Factory will be passed out through the main gate only; and the Jemadar or Naib Jemadar on duty will be held responsible that such property is passed out on a pass (Factory Form No. 137) duly countersigned by the Factory Superintendent.

The exceptions to this rule are—

(*a*) property belonging to the Public Works Department and lying in the leaf compound or its vicinity, which may be taken out by the leaf compound gate, but the Jemadar or Naib Jemadar on duty must first inspect and satisfy himself that the property passing out belongs to the Public Works Department, and that the pass in proper form has been drawn out by the Executive Engineer or his duly authorized subordinate, and countersigned by the Factory Superintendent;

(*b*) packed provision and abkari chests which may be passed out by the water gate. While chests are so passing out a duffadar or one of the Jemadars will be on duty at this gate in addition to the ordinary sentry;

(*c*) refuse and other Factory property sold by auction and lying in the leaf compound, which may be passed out by the leaf compound gate.

593. If a sentry has reason to suspect that an attempt is being made to break into the Factory, he will instantly raise an alarm and do all in his power to prevent the escape of the burglars.

594. If a sentry discovers or has reason to suspect that any building in the Factory or its vicinity is on fire, he will immediately

report the matter to the Jemadar or Naib Jemadar on duty at the main gate, the word being passed quickly and quietly from sentry to sentry.

The Jemadar or Naib Jemadar will at once report the matter to the Factory Superintendent, and will cause the alarm bell to be rung.

595. Sentries on duty at the gates will not permit any one to enter the Factory with a lighted cigar or pipe, nor should a sentry inside the Factory allow any one to pass his post with a lighted article of any description, except authorized Factory lanterns. Should no heed be paid to his remonstrances, he will at once pass the word from sentry to sentry to the Jemadar or Naib Jemadar at the main gate. The occurrence should under any circumstances be reported to the Factory Superintendent through the Sub-Inspector.

596. The duffadars are held responsible that the burkundazes of their "reliefs" are properly dressed, properly posted, and made acquainted with the orders of their posts.

597. The duffadar next for duty will "fall in" the men of his relief at the lines a quarter of an hour before the time for changing sentries, and will inspect them before marching off.

When marching his relief he will permit no straggling; the march will be strictly according to instructions received at drill.

598. The duffadar will personally place each man of his relief at his post, and will see that he examines all locks within his post before he marches off the old sentry.

Having posted all the men of his relief, he will make his report to the Jemadar or Naib Jemadar on duty at the main gate.

The duffadar going off duty will then march his men back to the lines and dismiss them there.

599. Immediately after posting his men the duffadar coming on duty will go round the Factory and examine all locks not previously examined under Rule 589, and will make his report to the Jemadar on duty.

600. The duffadar on duty will visit his sentries at least once during his tour of duty, reporting to the Jemadar any irregularities he may discover.

601. Every sentry will be visited at least once every night between the hours of 9 and 12 P.M., and once between 12 and 4 A.M., by one of the following officers:—

the Sub-Inspector,
the Jemadar,
the Naib Jemadar,
the Factory Engineer,
two Factory Assistants,

and at each post the visiting officer will apply to the control watch, which he will carry, the key of the post.

The visiting will be done according to roster, but the Engineer and the two Factory Assistants will not be allotted more than one night each during the week.

An officer falling ill, or being unable from other causes to take up his night duties, should at once report the circumstance to the

* These three officers have this duty allotted to them in consideration of having free quarters given them by Government on Factory premises.

Factory Superintendent, and also to the next officer on the roster, who will take up the duty. In order that the visiting should be effective, officers should continually change their hours.

602. Every morning a report (Factory Form No. 138) will be submitted to the Factory Superintendent by the officer visiting the sentries on the previous night. The form of report is designed to include the following information :—

(*a*) the number of sentries visited and their posts;
(*b*) the hours of visiting;
(*c*) the name and number of sentries found offending against the rules of the Factory, and the nature of the offences.

With the report the Sub-Inspector will submit the control watch, of which the Factory Superintendent keeps the key, and that officer will personally open the watch, examine the paper dial, affix a new one, and wind and set the watch again for the next night's rounds. The paper dials will be filed for record in the office.

603. An officer visiting the posts at night will be accompanied by the duffadar on duty.

A lamp will be kept, always trimmed, at the main gate for the use of the officer on night duty, who should be careful to leave it in its proper place again after each visit.

604. There will be kept in the Factory Superintendent's office a nominal roll of the entire guard force, and the following information regarding each man in the force will be duly and regularly recorded in it :—

(*a*) father's name and caste,
(*b*) approximate age and personal marks,
(*c*) date of first appointment,
(*d*) date of promotion or reduction,
(*e*) good or bad service from night and other reports,
(*f*) censures, punishments, rewards, &c.

The Head Clerk of the Factory Superintendent's office will be held personally responsible that this record is properly kept up.

605. The Sub-Inspector of the guard will be held responsible that every member of the force is fully acquainted with these rules, as well as such portions of the rules regarding search, musters and establishments as affect the force, and that each member is furnished with a copy of them in Hindi.

606. Each morning, before the Factory is opened for work, the Sub-Inspector or the senior officer present will in person report to the Factory Superintendent that, after examination, he finds everything in order, or as the case may be, and will report any noteworthy circumstance that may have occurred during the night. And every evening when the Factory is closed and the gates are locked the duffadar on duty will in person lodge the keys of the key-boxes and gates at the Factory Superintendent's house. These keys will be obtained again the next morning, when required, by the duffadar on duty, having been kept during the night in a secure place by the Factory Superintendent.

CHAPTER XII.

ACCOUNTS AND AUDIT.

SECTION I.

Stock Account and Returns.

607. Daily throughout the manufacturing season and weekly (7th, 14th, 21st, and end of month) during the rest of the year the Factory Superintendent will submit to the Agent his Factory stock account (Factory Form No. 139), showing the opening balance of the last return, receipts and expenditure during the day or week, as the case may be, and the closing balance of each description of stock compiled from the stock books of the several departments in the Factory. The Assistant in charge of each department will fill up the account of his department and will sign it. The entire stock account will then be examined by the Head Auditor before it is countersigned by the Factory Superintendent and submitted to the Agent.

608. On the conclusion of weighments of opium, leaves and trash, the Factory Superintendent will submit to the Agent reports on the results of the season. The reports will review in detail—

(*i*) the supply and quality of leaves, the mode and efficiency of packing, the manner of transport, and any other circumstances requiring notice or attention of district officers;
(*ii*) similar points regarding trash;
(*iii*) the packing and breakage of opium jars;
(*iv*) the quality and district classification of opium delivered.

609. The Factory Superintendent will submit to the Agent his annual report on the operations of the Factory not later than the 15th of November in each year, and with this report he will submit in duplicate the following returns embodying the transactions of the period extending from the 1st April to the 31st October :—

(*i*) statement showing receipt and expenditure of opium;
(*ii*) statement showing receipt and expenditure of leaves;
(*iii*) statement showing receipt and expenditure of trash;
(*iv*) statement of abkari opium manufactured and issued;
(*v*) statement of opium alkaloids manufactured and issued.

These returns will be submitted to the Board by the Agent with his annual report not later than the 30th November.

610. On the close of the financial year the Factory Superintendent will again submit to the Opium Agent the above returns in duplicate, incorporating the entire transactions extending from the 1st April to 31st March. An additional statement showing the average weight of provision chests packed during the past season will also be submitted at the same time.

These returns will also be submitted to the Board by the Agent with his countersignature.

611. In compiling statement (*i*) the following instructions will be observed. The account will be opened with the balance on the 31st March last. The cakes remaining on hand on 31st March will be brought to credit. The audited figures of the actual amount of all descriptions of opium (including pussewah and excluding district dhoi) will be credited from the detailed register of challans kept in the Audit Office. It should be borne in mind that the fines imposed or levied on good or any description of opium are not to be deducted from the stock credited in this account, as such fines do not affect the weight of opium received, nor should the scraping allowance on suspected or burnt opium pots that have been released by the Opium Examiner, or the scraping allowance in divisions where it is made in lieu of lamberdar's scrapings, be added to the stock, as such scrapings already form part of the Government khurchan.

The total amount of contraband opium received from the 1st April to 31st October, or 31st March, as the case may be, will next be credited, as well as opium received at the Factory from any other source. The sum of all the above items will form the total receipt for the period covered by the statement.

612. On the expenditure side of the statement the following items will be debited :—

(*i*) the total amount of opium for the manufacture of provision cakes exported from the malkhana, reduced to 70° consistence as entered in column 6 of the register of caking results, minus the actual loss for adhesion to vessels and on account of foreign substances, such as pottery, sticks, &c., as entered in columns 11 and 12 of the same register ;

(*ii*) the amount of lewa expended on manufacture, sattai, and repairs of provision cakes as shown in the stock-book of lewa, minus the quantity received back from the manufacturing and sattai operations as shown in the stock book of material for lewa manufacture ;

(*iii*) the amount of abkari opium reduced to 70° of consistence issued from the Factory to each revenue district or to the Board of Revenue, Lower Provinces, as shown by the stock-book of abkari opium;

(*iv*) the amount of contraband and burnt opium transferred to the laboratory for the manufacture of alkaloids out of the stock credited on the receipt side;

(*v*) the provision cakes packed and despatched from the Factory, or damaged cakes transferred for lewa purposes, out of the number credited on the receipt side of the account.

Also any other items of expenditure or issue not included under the above heads.

The sum of the above items will represent the total expenditure for the period covered by the statement.

613. The verified balance of opium of all descriptions, lewa, pussewah, dhoi and cakes of the previous year, as exhibited by the various stock books, will then be entered and added to the total expenditure. The sum of the balance and the total expenditure will then be compared with the total receipts, and the difference will be shown as a godown deficit on the expenditure side, or godown surplus on the receipt side, as the case may be.

614. At foot of the statement a memorandum will be added showing the provision cakes manufactured, and their equivalent in provision chests and cakes; and also showing any opium that may be in reserve, as well as the abkari, manufactured and unmanufactured, in hand, and the equivalent of the same in provision chests and cakes. All entries in statement (*i*) will be shown at 70° of consistence.

615. Statements (*ii*), (*iii*), (*iv*), and (*v*) will be compiled from the respective stock books.

616. The closing balances on the 31st March shown in all the above statements will represent the verified stock in hand obtained in accordance with the instructions laid down in this Manual under the chapters dealing with each description of stock. If possible, the verification of the stock of opium, lewa, pussewah and dhoi should be done before the 31st October, so that the verified balance might be shown in the return for that period.

617. During the import and manufacturing operations the Agent will submit to the Board of Revenue, L.P., a weekly (7th, 14th, 21st, and end of the month) return (Factory Form No. 140) compiled from the Factory stock account showing the receipt of jars and manufacture of cakes at the Factory.

SECTION II.

Audit of Opium, Leaves and Trash Accounts.

618. The books kept in connection with the stock of opium leaves and trash in the several departments of the Factory will be audited by the Audit Department in the manner laid down in this section.

619. *I.—Import Register of Opium—*

(*i*) Compare Import Register with the receipt book of challans kept in the Factory Superintendent's office.

(*ii*) Check column 14 of the Import Register with the original assay slips or receipts filed by the Import Officer.

(*iii*) Check columns 2 and 3 of the Import Register with columns 2 and 3 of the Audit Office "Register of challans passed."

620. *II.—Malkhana Stock-book—*

(*i*) Check the entries on the Import side with the "Receipt Register of challans," and compare with the parakh statement.

(*ii*) Check entries in columns 4 and 6 with corresponding entries in the Register of confiscated Opium, &c., kept in laboratory.
(*iii*) Check entries on the export side with the abstract of export.
(*iv*) Check entries of export with the corresponding Register of caking results and stock books of abkari and lewa.
(*v*) Check opening and closing balances and all intermediate calculations.

621. *III.—Register of Caking results—*

(*i*) Check columns 2 and 4 with memorandum of export and assay.
(*ii*) Check conversion in column 5 with tables.
(*iii*) Compare column 7 with certificate of caking vat assay.
(*iv*) Compare column 8 with the corresponding credits in the godown register of cakes, the receipt book of cakes, and the general register of cakes kept by the Assistant Factory Superintendent.
(*v*) Check calculations in column 10 with tables.
(*vi*) Check all lateral additions, &c.

622. *IV.—General Register of Cakes—*

(*i*) Check opening and closing balances and totals, &c.
(*ii*) Check issues with corresponding receipt entries in the stock-books of lewa, abkari, or laboratory (Factory Form No. 141) and authority of Factory Superintendent for such issue.
(*iii*) Checka ny other issues of cakes with receipt of receiving officer and authority of Factory Superintendent for issue.
(*iv*) Check despatches with number of cakes written off as packed, and also with the packing returns of the day, and finally also with the receipt of the Intendant of the Presidency godowns.

623. *V.—Godown Register of Cakes—*

(*i*) Check balances of cakes on the close of each month.
(*ii*) Check issues of cakes for packing or other purposes with the general register.

624. *VI.—Stock-book of material for Lewa—*

(*i*) Check the receipts with the corresponding issues from the stock books of the several departments;
(*ii*) Compare pussewah receipts with Audit Office register of challans passed.
(*iii*) Check assay consistences with assay slip, &c.
(*iv*) Check conversions to 52·50° with the help of tables.
(*v*) Check total issues, column 10, with corresponding credit in the stock book of lewa.
(*vi*) Check totals and opening and closing balances, &c.

625. *VII.—Stock-book of Lewa—*

(*i*) Check opening and closing balances and totals, &c.
(*ii*) Check issues with indents.

626. *VIII.—Stock-book of Abkari—*

(*i*) Check opening and closing balances and totals, &c.
(*ii*) Compare consistences with memorandum of export and assay.
(*iii*) Check conversion of the gross opium to 90° consistence with the help of tables.
(*iv*) Check entries in column 7 with corresponding entries in column 12.
(*v*) Check entries in column 8 with authority, and with credit in the stock book of the receiving department.
(*vi*) Check issues, column 14, with authority in abkari order-book, and with the indents passed by the Opium Agent, and finally with the receipts of the receiving officers.
(*vii*) Check number of chests in columns 11 to 15 with the corresponding quantity of opium exhibited in the same columns.

627. *IX.—Contraband Opium Register—*

(*i*) Check receipt entry with invoice of forwarding officer.
(*ii*) Check conversions to 70° consistence.
(*iii*) Check expenditure entries with credits in the stock-books of the receiving departments.

628. *X.—Stock Book of Confiscated Opium, &c.—*

(*i*) Check opening and closing balances, totals, &c.
(*ii*) Check confiscations with Audit Office register of challans.
(*iii*) Check column 7 with challan registers.
(*iv*) Check column 8 with invoice.
(*v*) Check column 9 with challans.
(*vi*) Check column 10 with contraband opium register.

629. *XI.—Stock Book of Alkaloids—*

(*i*) Check opening and closing balances, totals, &c.
(*ii*) Check issues with authority, and with indents passed by Agent, and finally with receipts of receiving officers.

630. *XII.—Import Register of Leaves—*

(*i*) Compare entries with the receipt book of challans kept in the Factory Superintendent's office and in the Audit Office.

631. *XIII.—Stock Book of Leaves—*

(*i*) Check opening and closing balances, additions and deductions.
(*ii*) Check entries on receipt side with the register of leaf challans in the Audit Office.
(*iii*) Check issues with indents passed by the Factory Superintendent.
(*iv*) Check any special expenditure with authority for the same.

632. *XIV.—Trash-cleaning Day-book—*

(*i*) Check all calculations.

633. *XV.—Stock Book of Trash—*

(*i*) Check opening and closing balances, additions and deductions.

(*ii*) Check receipts of uncleaned trash with the receipt register kept in the Audit Office.

(*iii*) Check columns 5 and 6 with the trash-cleaning day-book.

(*iv*) Check receipts of cleaned trash with column 5 of uncleaned trash.

(*v*) Check issues with indents passed by the Factory Superintendent.

(*vi*) Check any special expenditure with authority for the same.

APPENDIX TO OPIUM MANUAL.

PART III.

(GHAZIPUR FACTORY).

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APPENDIX A.

List of Returns to be submitted in connection with the Ghazipur Opium Factory.

NAMES OF RETURNS.	From whom.	To whom.	Date of submission.	Number of form.	Code reference.	REMARKS.
Daily.						
Weighment report of opium	Factory Superintendent...	Opium Agent	Daily	33	Rule 163	During opium weighments only.
Sattai report	Ditto ...	Ditto	Do.	75	,, 278	During sattai operations only.
Report on packing stores	Ditto ...	Ditto	Do.	75	,, 302	Ditto ditto.
Packing returns of provision opium ...	Ditto ...	Ditto	Do.	92, 93, 94, 95 & 96.	,, 425	During packing generally on alternate days for a despatch of a 1,000 chests.
Factory muster-roll of temporary establishment.	Ditto ...	Ditto	Do.	130	,, 516	
Stock and manufacturing account ...	Ditto ...	Ditto	Do.	139	,, 607	During import and manufacturing operations.
Weekly.						
Packing diary of Assistant Superintendent.	Factory Superintendent ..	Opium Agent	End of each week	.....	Rule 330	During the packing operations.
Stock and manufacturing account ...	Ditto ...	Ditto	1st, 8th, 15th, 22nd of each month.	139	,, 607	Except during import and manufacturing operations.
Statement of import and manufacturing operations.	Agent	Board	Ditto ...	140	,, 617	During import and manufacturing operations.
Monthly.						
Statement of abkari issues	Factory Superintendent...	Opium Agent	Close of each month ...	.....	Rule 442	
Ditto ditto	Agent	Accountant-General, Bengal.	Ditto ...	104	,, 442	
Statement of articles purchased ...	Factory Superintendent...	Opium Agent	Ditto ...	119	,, 469	
Ditto of articles sold by auction ...	Ditto ...	Ditto	Ditto ...	123	,, 469	
Half-yearly.						
Statement (i), opium	Factory Superintendent...	Opium Agent	1st April and 15th November in each year.	.....	Rules 609 & 610.	
Ditto (ii), leaf	Ditto ...	Ditto	Ditto ...	.....	,, 609 & 610.	
Ditto (iii), trash	Ditto ...	Ditto	Ditto ...	.....	,, 609 & 610.	

Ditto (iv), abkari, manufactured and issued.	Ditto ...	Ditto	Ditto ...	.....	„ 609 & 610.	
Ditto (v), alkaloids, manufactured and issued.	Ditto ...	Ditto	Ditto ...	.....	„ 609 & 610.	
Ditto (i), opium	Opium Agent ...	Board	15th April and 30th November in each year.	.....	„ 609 & 610.	
Ditto (ii), leaf	Ditto ...	Do.	Ditto ...	.....	„ 609 & 610.	
Ditto (iii), trash	Ditto ...	Do.	Ditto ...	.....	„ 609 & 610.	
Ditto (iv), abkari, manufactured and issued.	Ditto ...	Do.	Ditto ...	.....	„ 609 & 610.	
Ditto (v), alkaloids, manufactured and issued.	Ditto ...	Do.	Ditto ...	.....	„ 609 & 610.	
Annually.						
Indent for leaves	Factory Superintendent...	Opium Agent	1st August	.....	Rule 7	
Verification statement of leaves	Ditto ...	Ditto	31st March	10	„ 31	Stock should be taken after sattai or packing.
Indent for trash	Ditto ...	Ditto	1st August	.....	„ 49	
Verification statement of trash	Ditto ...	Ditto	31st March	.....	„ 73	
Statement of opium held in deposit ...	Ditto ...	Ditto	15th October	.....	„ 156	This statement is submitted three months after the close of weighments.
Verification statement of opium ...	Ditto ...	Dtto	31st October or 31st March	.....	„ 183	If possible stock should be taken by the 31st October.
Indent for provision chests, tickets, &c.	Ditto ...	Ditto	1st August	78 & 86	„ 307	
Verification statements of manufactured abkari opium, lewa, passewa and thick dhoi.	Ditto ...	Ditto	31st March	.....	Rules 443 & 616.	
Verification statement of stores	Ditto ...	Ditto	Ditto	117	Rule 466	
Estimate of requirements of European stores.	Ditto ...	Ditto	15th June	120	„ 469	
Indent for European stores	Ditto ...	Ditto	1st November	121	„ 469	
Statement of expenditure on European stores.	Ditto ...	Ditto	31st March	122	„ 469	
Plus and minus dead-stock statement ...	Ditto ...	Ditto	Ditto	15 (opium form).	„ 469	
Indent for cups	Ditto ...	Ditto	31st January	.....	„ 471	
Review of leaf and trash receipts ...	Ditto ...	Ditto	15th July	.....	„ 608	
Ditto of the receipt of opium	Ditto ...	Ditto	15th August	.....	„ 608	
Annual report on the working of the factory.	Ditto ...	Ditto	15th November	.....	„ 609	
Statement of packing weight	Ditto ...	Ditto	1st April	.....	„ 610	
Ditto ditto	Opium Agent ...	Board	15th April	.....	„ 610	
Five-yearly.						
Dead-stock return	Factory Superintendent...	Opium Agent	Close of financial year, 1891, 1896, &c.	A. G. B. form No. 158 (new).	Rule 469	

APPENDIX B.

List of forms prescribed in the Opium Manual, Part III.

Serial number of forms.	Description of Forms.	Code reference.
1	Import Register—Leaf	Rule 9
2	Receipt for leaf challans ...	,, 10
3	Receipt book for opium leaf or trash challans sent to Audit Office.	,, 16
4	Daily register of leaf challans received.	,, 17
5	Objection statement for leaf challans.	,, 17
6	Detailed audit register of leaves	,, 19
7	Memorandum of leaves weighed each day.	,, 22
8	Stock-book of leaves	,, 22
9	Daily weighment record of choor leaves.	,, 29
10	Register of stock-taking of leaves	,, 31
11	Indent for leaves	,, 32
12	Leaf assay form	,, 36
13	Register of leaf expenditure on manufacture of cakes.	,, 48
14	Register of leaf expenditure on sattai and repairs of cakes.	,, 48
15	List of trash contracts	,, 51
16	Trash weighment register ...	,, 55
17	Memorandum of foreign matter in trash.	,, 57
18	Receipt for trash	,, 57
19	Trash weighment abstract ...	,, 61
20	Trash Ledger	,, 62
21	Abstract of trash ledger ...	,, 62
22	List of trash contracts completed	,, 64
22(*a*)	Ditto ditto, vernacular	,, 64
23	Memorandum of trash received each day.	,, 65
24	Stock-book of trash	,, 65
25	Trash cleaning day-book... ...	,, 68
26	Indent for trash	,, 71
27	Import Register of Opium ...	,, 76
28	Register of broken jars	,, 76
29	Register of baskets and packing materials, &c.	,, 76
30	Register of average weight of baskets and straw.	,, 79
31	Daily report of challan opium jars and pots received at the Sadr Factory.	,, 80
32	Daily report of broken opium jars received at Sadr.	,, 80
33	Daily weighment report	,, 80
34	Receipt to contractors for jars and pots.	,, 82
35	Check weighment register of empty jars.	,, 93
36	Receipt book of jars and pots sent to laboratory.	,, 95
37	Daily report of jars and pots weighed at the Factory.	,, 98
38	Parakh slip of opium challan ...	,, 98
39	Parakh paper	,, 104
40	Register of fines imposed on good opium.	,, 108
41	Discharge certificate for zilladars for jars and pots.	,, 109
42	Daily parakh report	,, 110
43	Malkhana stock-book	,, 110
44	Assay register for challan opium	,, 116
45	Laboratory parakh paper ...	,, 135
46	Register of pots examined ...	,, 144
47	Memorandum showing the results of laboratory examination of suspected opium, &c.	,, 145
48	Stock-book of confiscated opium, &c.	Rule 145
49	Memorandum of passewa ...	,, 151
50	Receipt register of challans ...	,, 157
51	Review statement of challans ...	,, 159
52	Daily abstract register of gross and damdata opium	,, 170
53	Daily progress report of challans passed.	,, 171
54	Register of scrapings obtained...	,, 182
55	Lewakhana assay register ...	,, 190
56	Stock-book of opium, &c., received for manufacture of lewa.	,, 190
57	Lewa Assay Certificate	,, 202
58	Indent for lewa	,, 204
59	Stock-book of lewa manufactured.	,, 205
60	Memorandum of export assay ...	,, 209
61	Register of tickets for caking ...	,, 210
62	Export opium tickets	,, 210
63	Abstract of opium exported ...	,, 215
64	Register of exports from malkhana.	,, 215
65	Register of caking results ...	,, 215
66	Vat assay certificate	,, 217
67	Register of bad cakes	,, 256
68	Register of cakes made by each cake-maker.	,, 256
69	Monthly register of cakes manufactured by each cake-maker.	,, 256
70	Receipt book of cakes	,, 259
71	General register of cakes ...	,, 259
72	Register showing weight of 100 cakes.	,, 262
73	Cake godowns' block slip ...	,, 263
74	Diary of daily operations of cake godowns.	,, 267
75	Daily report of sattai and repairs of cakes.	,, 278
76	Godown statement showing the weight of 80 cakes.	,, 279
77	Register of cakes wetted by leakage.	,, 292
78	Chest tickets, Benares	,, 307
79	Report of packing stores ...	,, 319
80	Trash assay and weather register for packing.	,, 326 & 333
81	Register of packing weights ...	,, 337
82	Register showing results of examination of packed chests.	,, 342
83	Account of packing and weighing provision chests.	,, 361
84	Daily register of cakes packed ..	,, 361
85	Certificate of cakes packed ...	,, 361
86	Tally sheets of provision opium chests despatched	& 387 ,, 405
87	Abstract of check weighment of provision opium chests.	,, 410
88	Report of loading chests on boats.	,, 413
89	Contractor's receipt for chests...	,, 414
90	Report of Assistant superintending despatches at railway station.	,, 418
91	Head-constable's receipt for provision opium chests.	,, 420
92	Invoice of provision chests despatched.	,, 425
93	Certificate showing quality, weight, &c., of provision chests.	,, 425

2. Page 132, Appendix B, List of forms:—

Add the words "and certificate" after the word "Invoice" against No. 92 in the column "Description of forms" of the above list and strike out the Nos. 93, 94, 95 and 96, and the words against them, respectively:— 20-11-1902.

Page 133, Appendix B.—

Read "Advice of despatch of abkari opium" *for* the words "Invoice of chests of abkari opium despatched," against serial number of Form No. 102. 15-9-1901.

Serial number of forms.	Description of Forms.	Code reference.
94	Abstract of weighment of the contents of chests.	Rule 425
95	Invoice of gross weight of chests despatched.	,, 425
96	Statement showing the despatching charges of chests.	,, 425
97	Stock-book of Abkari opium ...	,, 429
98	Register of Abkari assays ...	,, 433
99	Abkari chest ticket	,, 436
100	Register of packed chests of Abkari opium.	,, 439
101	Abkari opium supply order-book	,, 440
102	Invoice of chests of Abkari opium despatched.	,, 440
103	Receipt for Abkari opium from the indenting officer.	,, 441
104	Statement of opium supplied for abkari purposes.	,, 442
105	Contraband opium account ...	,, 448
106 } 107 }	Statement of result of examination of contraband opium.	,, 452
108	Stock-book of alkaloids ...	,, 455
109	Day-book of stores received ...	,, 460
110	Store Ledger	,, 460
111	Indent for articles required from the Store Department.	,, 461
112	Day book of stores issued ...	,, 461
113	Indent for stores for weighments	,, 462
114	Do. for chemicals and laboratory stores.	,, 462
115	Invoice for articles supplied ...	,, 462
116	Challan of articles returned into store.	,, 463
117	Detailed statement of stores verified.	,, 466
118	Auction Register of Stores ...	,, 468
119	Statement showing articles purchased in India.	Rule 469
120	Estimate of stores required from England.	,, 469
121	Indent for European stores ...	,, 469
122	Annual statement of expenditure on stores.	,, 469
123	Statement of sale proceeds of unserviceable articles.	,, 469
124	Stock-book of cups	,, 476
125	Cup contractors' ledger ...	,, 476
126	Receipt to contractors for cups	,, 476
127	Indent for cups	,, 480
128	Indent for temporary establishment.	,, 487
129	Cooly Attendance Roll	,, 493
130	Factory Muster Roll of cooly establishment.	,, 505
131	Cooly bills (Pay abstract) ...	,, 520
132	Certificate of undisbursed pay.	,, 520
133	Treasury Register of payments	,, 524
134	Deposit register of undisbursed pay.	,, 527
135	Challan of undisbursed pay to be kept in deposit.	,, 529
136	Report on the working of fire-engines.	,, 582
137	Factory pass	,, 592
138	Factory Guards' night report ...	,, 602
139	Stock and manufacture accounts of opium leaf and trash, &c.	,, 607
140	Periodical report of import and manufacturing operations.	,, 617
141	Laboratory stock-book of opium held for analysis, &c.	,, 622

FACTORY FORM No. 1.]

BENARES OPIUM AGENCY.

Daily Import Register of Leaf Challans of season 189

1	2	3	4	5	6	7	8	9	10	11
Date of receipt.	Date of weighment.	Sub-division.	Number of challan.	Number of baskets or cylinders.	Weight of leaves as per challan.	Baskets or cylinders, if former materials of which they are made.	General condition of challan.	Number of receipt granted to zilladar.	Number of receipt granted to carriers.	REMARKS.

FACTORY FORM No. 2.]

Sadr Factory Receipt for Challan Leaf Cylinders and Baskets.

NAME OF SUB-DIVISION.	Number of challan.	Cylinders.	Baskets.	Total.	Name of zilladar in charge.	Date of arrival of challan at the Factory.	Date of zilladar's release from the Factory.	REMARKS.

BENARES OPIUM AGENCY;
SADR FACTORY,
Dated the 189 .

Import Officer.

Factory Superintendent.

Sadr Factory Receipt for Challan Leaf Cylinders and Baskets.

NAME OF SUB-DIVISION.	Number of challan.	Cylinders.	Baskets.	Total.	Name of zilladar in charge.	Date of arrival of challan at the Factory.	Date of zilladar's release from the Factory.	REMARKS.

BENARES OPIUM AGENCY;
SADR FACTORY,
Dated the 189 .

Import Officer.

Factory Superintendent.

FACTORY FORM No. 3.]

BENARES OPIUM AGENCY.

Opium / Leaf / Trash *Challan Registers sent to Audit Office, season* 189

Month and date.		Sub-division.	Challan number.	Daily total number of challans.	Acknowledgment of Audit Office.

FACTORY FORM No. 4.]

BENARES OPIUM AGENCY.

Register of challans of Poppy Flower Leaves received in the Audit Office.

Date of receipt of challan in the Audit Office.	Sub-division.	Number of challan.	Number of		Gross weight of leaves as per challan.			Net Factory weight of leaves.			Daily Factory total.			Grand total.			Remarks.
			Baskets.	Cylinders.	Mds.	s.	ch.	Mds.	s.	ch.	Mds.	s.	ch.	Mds.	s.	ch.	

FACTORY FORM NO. 5.]

BENARES OPIUM AGENCY.

Objection statement showing the result of examination of Leaf challans after weighment, season 189 -9

Sub-division.	Challan number.	Number of basket or cylinder under objection.	Quantity objected to.			Nature of objection.	Remarks by the Head Auditor.	Orders of the Factory Superintendent.	REMARKS.
			Mds.	s.	ch.				

FACTORY FORM NO. 6]

BENARES

Register of Poppy Flower Leaves of Sub-

Date.	AS PER CHALLAN.																		AS PER		
	Number of challan.	Number of		Weight of basket or cylinders.			Class I.			Class II.			Class III.			Total.			Class. I.		
		Baskets.	Cylinders.	M.	s.	C.	M.	s.	C.	M.	s.	C.	M.	s.	C.	M.	s.	C.	M.	s.	C.

OPIUM AGENCY.

division *under* *Division for season.*

Factory Weighment.													Leaves passed for Payment.															
Class II.			Class III.			Total.			Increase.			Decrease.			Class I.			Class II.			Class III.			Total.			Value.			Remarks.
M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	Rs.	a.	p.	

FACTORY FORM No. 7.]

BENARES OPIUM AGENCY.

Memorandum of Poppy flower leaves received into the Factory on 189

Details.	Factory weight of leaves. M.	s.	c.	REMARKS.
Received this day				
Previously received				
Total ...				

BENARES OPIUM AGENCY;
SADR FACTORY,
The 189 .

Factory Superintendent.

Head Auditor.

Entered in Stock Book.

Assistant in charge of Leaf Dept.

BENARES OPIUM AGENCY.

Memorandum of Poppy flower leaves received into the Factory on 189

Details.	Factory weights of leaves. M.	s.	c.	REMARKS.
Received this day				
Previously received				
Total ...				

BENARES OPIUM AGENCY;
SADR FACTORY,
The 189 .

Factory Superintendent.

Head Auditor.

Entered in Stock Book.

Assistant in charge of Leaf Dept.

FACTORY FORM No. 8.]

BENARES OPIUM AGENCY.

Stock Book of Poppy flower leaves at the Sadr Opium Factory.

Month and date.	Opening balance.			Receipts.			Total of columns 2 and 3.			Expenditure.														Closing balance, deducting column 9 from column 4.			Initials of officer in charge.	Remarks.
										Manufacture.			Satai and repairs.			Petty repairs.			Breakage, &c.			Total of columns 5 to 8.							
1	2			3			4			5			6			7			8			9			10			11	12
	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.		

FACTORY FORM No. 9.]

BENARES OPIUM AGENCY.

Daily weighment record of Choor, season 189 -9

Month and date.	Quantity of leaf sorted.			Total quantity of leaf sorted.			Quantity of choor obtained.			Total quantity of choor.			Daily percentage of choor on quantity sorted.	Signature of Assistant who weighed the choor.	REMARKS
	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.			

FACTORY FORM No. 10.]

BENARES OPIUM AGENCY.

Register of Stock-taking of Poppy flower leaves, season 189 -9

Date of weighment.	QUANTITY OF SERVICEABLE LEAVES WEIGHED EACH DAY.															Total weight of serviceable leaves stored up to date.			Initials of weighing officer.	REMARKS.
	Class I or chandi.			Class II or dawan.			Class III or gata.			Sattai leaves.			Total.							
	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.		

FACTORY FORM No. 11.]

BENARES OPIUM AGENCY.

Indent for Leaf required for 189

FOR MANUFACTURE OF CAKES.						FOR SATTAI.										FOR PETTY REPAIRS,				REMARKS.
Number of bhagas corresponding number of cakes to be made.	Number of excess bhagas for repairs, &c.	Total number of bhagas.	Total amount of leaves at 5 chittacks per bhaga plus atmospheric moisture. (To be filled in by the Leaf Assistant).			Number of cakes to be sattaied and repaired.	Leaf at 2·25 kutcha per cake,			Wastage, atmosphere moisture, &c.			Total.			Number of cakes to be repaired.	Leaf required.			
			M.	S.	C.		M.	S.	C.	M.	S.	C	M.	S.	C.		M.	S.	C.	

Factory Superintendent. *Indenting Officer.*

FACTORY FORM No. 12.]

No.

BENARES OPIUM AGENCY.

SADR FACTORY.

Register of Assay of Leaf, season 189 -9 .

1	2	3			4	5	6	7	8		9
Month and date.	WEIGHT OF LEAVES—				Loss in weight.	Deduction for normal moisture.	Compensation for 5 seers (column 4—column 5).	Compensation per bhaga of 5 chittacks.	Weight of leaves to be used in each bhaga.		REMARKS.
	Before drying.	After drying.									
	S.	S.	C.	K.					C.	K.	

Assistant Opium Examiner. *Asst. Superintendent.* *Factory Superintendent.*

FACTORY FORM NO. 13.]

BENARES OPIUM AGENCY.

Account of Poppy Flower Leaves expended on manufacture of cakes of season 189

1	2	3	4	5	6				7		8				9				10				11				12				13				14				15				16
Date.	Number of cakes.	NUMBER OF BHAGAS INDENTED FOR.			Weight of leaf in column 5 at 5 chittacks per bhaga.				Rate of compensation for atmospheric moisture per bhaga.		Total amount of compensation for atmospheric moisture.				Total leaf issued (to be deducted from leaf stock book), column 6+8.				Deduct authorised wastage at ¼ kutcha per bhaga.				Net quantity available, column 9 minus column 10.				Broken leaf obtained during weighments, wetting and manufacture.				Net actual expenditure on cakes manufactured, column 9 minus column 12.				Below authorised expenditure, column 11 minus column 13.				Above authorised expenditure, column 13 minus column 11.				REMARKS.
		For cakes to be manufactured.	For repairs and excess.	Total.	M.	S.	C.	K.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	

FACTORY FORM No. 14.]

BENARES OPIUM AGENCY.

Account of Poppy Flower Leaves expended on Sattai and Repairs for season 189 -9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Month and date.	Number of cakes sattaied.	Number of cakes repaired.	Number of cakes sattaied and repaired.	Leaves expended on sattai.	Leaves expended on repairs.	Expenditure of leaves on sattai and repairs to be shown in the stock book.	Deduct actual wastage.	Allowance made for atmospheric moisture.	Total allowance for atmospheric moisture.	Total deduction per diem.	Net quantity of leaves expended on sattai and repairs.	Authorised expenditure at the rate of 2½ kutchus per cake.	Below authorised expenditure.	Above authorised expenditure.	Average allowance per cake.

FACTORY FORM No. 15.]

BENARES OPIUM AGENCY.

List of Poppy Trash Contracts.

Serial number.	License number.	Name of contractor.	Name of sub-division.	Name of village.	Amount contracted for.			REMARKS.
					MDS.	S.	C.	

FACTORY FORM NO. 16.]

BENARES OPIUM AGENCY.

Register of Trash weighment at Sadr Factory.

Name of sub-division— No. of bags—

Month and date of weighment—

Letter and serial number of bag.	Name and serial number of contractor.	Weight of trash in each bag.		Letter and serial number of bag.	Name and serial number of contractor.	Weight of trash in each bag.		REMARKS.
		MDS.	S.					

MEMORANDUM A.

MEMORANDUM B.

* Serial numbers borne by the selected bags.	Weight of trash in each bag.		Weight of foreign matter extracted.			Total weight of trash in the challan.		Weight of unserviceable trash.		Weight of serviceable trash.	
	MDS.	S.	MDS.	S.		MDS.	S.	MDS.	S.	MDS.	S.

SADR FACTORY,

The 189 .

Trash Weighment Officer.

Head Auditor. *Factory Superintendent.*

FACTORY FORM No. 17.]

BENARES OPIUM AGENCY.

Memorandum showing quantity of Foreign matter removed from sample bags of each consignment of trash.

Sub-Division *No. of challan* *Date of weighment* 189

Number of bags selected.	Weight of trash in bags selected.		Weight of foreign matter extracted.		Signature of weighing officer.
	Mds.	Srs.	Mds.	Srs.	

FACTORY FORM No. 18.]

BENARES OPIUM AGENCY.

Sadr Factory receipt for trash.

Date.	Name of sub-division.	Number of challan (or contract).	Number of bags weighed (in words and figures).	Name of zilladar or contractor.

Signature of Weighing Assistant.

BENARES OPIUM AGENCY.

Sadr Factory receipt for trash.

Date.	Name of sub-division.	Number of challan (or contract).	Number of bags weighed (in words and figures).	Name of zilladar or contractor.

Signature of Weighing Assistant.

FACTORY FORM NO. 19.]

BENARES OPIUM AGENCY.

Abstract of trash weighed at the Sadr Factory of sub-division

Date 189

Serial No. of contract.	Names of contractors.	No. of bags delivered.	Trash in bags selected for examination.		Foreign matter extracted.		Total trash delivered by each contractor.		Deduct foreign matter.		Net weight of trash to be paid for.		REMARKS.*
			Mds.	s.	Mds.	s.	Mds.	s.	Mds.	s.	Mds.	s.	
	Total ...												

Calculated by

Checked by

BENARES OPIUM AGENCY,
The 189 . } *Head Auditor.* *Factory Superintendent.*

FACTORY FORM NO. 20.]

BENARES OPIUM AGENCY.

Contractors' Trash Ledger Account.

Name of Contractor— Name of sub-division—

Number of contract— Quantity contracted for mds—

1	2	3	4		5		6		7		8
Date of delivery of trash.	Date of weighment.	Number of bags weighed.	Weight of trash in bags weighed.		Deduction on account of foreign matter.		Daily balance of trash to be paid for.		Total quantity of trash to be paid for up to date.		REMARKS.
			Mds.	s.	Mds.	s.	Mds.	s.	Mds.	s.	

FACTORY FORM NO. 21.]

BENARES OPIUM AGENCY.

Abstract of Trash Ledger for guidance of Weighment Officers Subdivision *season* 189

Number of contract.	Name of contractor.	Total amount of contract.	TRASH DELIVERED UP TO DATE.																				REMARKS.
			1st instalment.	Balance.	2nd instalment.	Balance.	3rd instalment.	Balance.	4th instalment.	Balance.	5th instalment.	Balance.	6th instalment.	Balance.	7th instalment.	Balance.	8th instalment.	Balance.	9th instalment.	Balance.	10th instalment.	Balance.	
		MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	MDS.	

FACTORY FORM No. 22.]

BENARES OPIUM AGENCY.

DIVISION.

List of Trash contracts of Subdivision *for season* 189 -9 .

1	2	3	4		5		6		7
Serial number of contract.	Names of contractors.	Quantity of trash contracted for by each contractor.	Gross quantity of trash received at the Factory from each contractor.		Deduction on account of foreign matter.		Balance of trash to be paid for.		REMARKS.
		MDS.	MDS.	SRS.	MDS.	SRS.	MDS.	SRS.	

SADR FACTORY;
The 189 . } *Head Auditor.* *Factory Superintendent.* *Opium Agent.*

FACTORY FORM No. 22(*a*).]

گودام فارم نمبر ۲۲ (*a*)

——— سب ایجنسي بنارس اوپیم ایجنسي

فهرسب ٹیکهه پتني سب - ڈوزن ——— بابت سنه ۹ ۱۸۹ع

۷	۶	۵	۴	۳	۲	۱
کیفیت	باقي پتي جسکي قیمت دي جایگي	مینهائي بغرض آمیزش غیر اقسام	مقدار وزن پتي جسکو فی ٹیکهه دار گودام مین ایکدم خ	مقدار ٹیکهه پتي في کس	نام ٹیکهه دار	نمبر شمار ٹیکهه

SADR FACTORY;
The 189 . } *Head Auditor.* *Factory Superintendent.* *Opium Agent.*

FACTORY FORM No. 23.]

BENARES OPIUM AGENCY.

Trash received in the Sadr Factory on the 189 .

Division.	Sub-division.	Number of bags.	Gross quantity of trash as per factory weighment. Mds.	s.	REMARKS.
	Total ...				

SADR FACTORY;
The 189 .

Head Auditor.

entered in Stock Register.

Assistant in charge, Trash Department.

Factory Superiniendent.

BENARES OPIUM AGENCY.

Trash received in the Sadr Factory on the 189

Division.	Sub-division.	Number of bags.	Gross quantity of trash as per factory weighment. Mds.	s.	REMARKS.
	Total ...				

SADR FACTORY;
The 189 .

Head Auditor.

entered in Stock Register.

Assistant in charge, Trash Department.

Factory Superintendent.

FACTORY FORM NO. 24.]

BENARES OPIUM AGENCY.

Register of Receipts and Expenditure of Trash in the Sadr Opium Factory, season 189 -9

Month and date.	UNCLEANED TRASH.							CLEANED TRASH.									Initials of Assistant in charge.	REMARKS.
	Opening balance.	Receipts.	Total.	Issued for cleaning.			Closing balance.	Opening balance.	Receipts as per column 5.	Total.	Issued for—					Closing balance		
				Cleaned trash.	Loss at 36 per cent.	Total.					Manufacture.	Sattai and repairs.	Rubbing of cakes.	Packing.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

FACTORY FORM No. 25.]

BENARES OPIUM AGENCY.

Daily account of the cleaning of Poppy Trash, season 189 -9

1	2	3			4			5	6			7			8			9			10	11
Month and date.	Number of sieves working.	Boxes measured by assistant in charge.			Average per box as per assistant's weighments.			Total number of boxes measured.	Total of cleaned trash, column 4 multiplied by column 5.			Refuse at 98 per cent., being 49ths of column 6.			Total of uncleaned trash, column 6 plus column 7.			Average of cleaned trash per sieve, column 6 divided by column 2.			Initials of assistant in charge.	REMARKS.
		M.	s.	c.	M.	s.	c.		M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.		

FACTORY FORM NO. 26.]

BENARES OPIUM AGENCY.

Trash Indent.

Date.	Number of cakes to be manufactured, sattaied or rubbed.	Number of chests to be packed.	Rate per chest.		Total quantity of trash required.		REMARKS.
			S.	C.	M.	S.	

Assistant Factory Superintendent. *Indenting Officer.*

Factory Superintendent.

FACTORY FORM No. 27.]

BENARES OPIUM AGENCY.

Import Register of Opium.

Date of arrival.	Sub-division.	Number of challan.	KIND AND NUMBER OF JARS OR POTS.													Number of breakages.	Date of Factory weighment.	Number and date of parakh paper as acquittance.		REMARKS.
			Good opium and khurchan.		Inferior.		Government scrapings.		Government dhoi.		Passewa.		Suspected.	Burnt.	Assamiwar.			Number.	Date.	
			Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Number of pots.	Number of pots.	Number of pots.					

FACTORY FORM NO. 28.]

BENARES OPIUM AGENCY.

Register of Opium Jars found on arrival at the Sadr Factory, Ghazipur, to be broken, Season 189 -9

Serial number.	Date of arrival at Factory.	AS PER SUB-DEPUTY'S CHALLAN.							AS PER SADR FACTORY WEIGHMENT.				WHERE BROKEN.			FOR CHALLANS NOT CONVEYED BY RAIL.			REMARKS.
		Sub-division.	No. of challan.	No. of jar broken.	Class.	Weight of empty jar with lid, cloth cover and twine.	Weight of opium in the jar.	Gross weight of opium and jar together when complete, columns 7 and 8.	Gross weight of opium and jar.	For Audit office only.			At sub-division.	Between sub-division and Tarighat station.	Between station and factory.	Broken on cart.	Broken on boat.	Nature of jar that reached Factory, whether original or refilled.	
										Increase.	Decrease.	Net weight of opium.							

FACTORY FORM No. 29.]

BENARES OPIUM AGENCY.

Register of the state of Baskets and packing of challan Opium Jars received at Sadr Factory, Ghazipur season 189

1	2	3	4	5	6	7
Subdivision.	Number of challan.	BASKETS.		PACKING.		REMARKS.
		Material.	Quality.	Material.	Quality.	

Import Officer.

FACTORY FORM No. 30.]

BENARES OPIUM AGENCY.

Register showing the average weight of Baskets and Straw for season 189 -9

Month and date.	Name of Sub-division.	Number of challan.	Weight of 6 baskets and straw.	Average weight of one basket with straw.	Initials.

FACTORY FORM No. 31.]

BENARES OPIUM AGENCY.

Daily report of challan opium jars and pots received at the Sadr Factory on the 189

Names of Divisions.	Names of sub-division.	Number of challan.	Number of jars or pots of																		Total of each Division.		Remarks.
			Good opium.		Inferior opium.		Assamiwar.		Suspected.		Burnt.		Pussewa.		Kuffa.		Government scrapings.		Dhoi.				
			Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	

Import Officer.

FACTORY FORM NO. 82.]

BENARES OPIUM AGENCY.

Daily Report of Broken Opium Jars received at the Factory on the 189

Sub-division.	Number of challan.	Total number of jars in the challan.	Details of jars broken.	Total.	REMARKS.

BENARES OPIUM AGENCY;
The 189

Import Officer.

FACTORY FORM NO 33.]

BENARES OPIUM AGENCY.

Daily report of breakage of Jars of good opium and result of Factory weighment for 189

SUB-DIVISION.	Number of challan.	Total number of jars.	NUMBER OF JARS BROKEN.				Weight as per challan.			Factory weight.			DIFFERENCE.				'Average decrease per maund.		REMARKS.
			At sub-division.	Between sub-division and Tarighat station.	Between station and factory.	At factory.							Increase.			Decrease.			
							M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	S.	C.	

BENARES OPIUM AGENCY;
Audit Office,
The 189 .

Head Auditor. *Factory Superintendent.*

FACTORY FORM No. 34.]

BENARES OPIUM AGENCY.

Received from *the undermentioned Challan Opium Jars and Pots.*

Challan No.	Sub-division	Jars.	Pots.	REMARKS.

BENARES OPIUM AGENCY;
The 18?? .

Factory Superintendent. *Import Officer.*

FACTORY FORM No. 5.]

BENARES OPIUM AGENCY.

Check weighment register of empty Jars.

Date.	Sub-division.	Challan No.	Number of Jars.	Weight of Jars and Opium as per challan.			Factory weighment.			Tare of Jar as per challan.		Weight of Jar after washing (including weight of lids, cloths, &c.).		Increase.	Decrease.	REMARKS.
				M.	S.	C.	M.	S.	C.	S.	C.	S.	C.			

FACTORY FORM No. 36.]

BENARES OPIUM AGENCY.

Receipt book of Jars and Pots weighed and sent to laboratory by Import Officer.

Date.	Sub-division.	Description of challan.	Number of challan.	Number of jars and pots.		Total number of jars and pots despatched to laboratory.		Acknowledgment of Assistant Opium Examiner.	REMARKS.
				Jars.	Pots.	Jars.	Pots.		

FACTORY FORM No. 37.

BENARES OPIUM AGENCY.

Daily Report of Challan Opium Jars and Pots weighed at the Sadr Factory on the 189 .

Names of Divisions.	Sub-divisions.	Number of challan.	NUMBER OF JARS OR POTS OF—																TOTAL OF EACH DIVISION.		REMARKS.
			Good Opium.		Inferior Opium.		Assamiwar.		Suspected.		Burnt.		Pussewah.		Kuffa.		Government scrapings.		Dhoi.		Jars.	Pots.	
			Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.			

FACTORY FORM No. 38.]

ORIGINAL.

BENARES OPIUM AGENCY.

Parakh slip of *Opium challan No.*
of Sub-Division

DISTRICT PARAKH.	Number of Jars.	FACTORY PARAKH. Number of Jars.	Class.	Assay result.	Jars on which fines have been imposed.	REMARKS.
Total Jars						

Memorandum.

(1) Number of jars broken in transit ...
(2) Quality of packing and general condition of challan.

Assistant Opium Examiner.

IMPORT OFFICER.

Opium Examiner.

The 189 .

DUPLICATE.

BENARES OPIUM AGENCY.

Parakh slip of *Opium challan No.*
of Sub-Division

DISTRICT PARAKH.	Number of Jars.	FACTORY PARAKH. Number of Jars.	Class.	Assay result.	Jars on which fines have been imposed.	REMARKS.
Total Jars ...						

Assistant Opium Examiner.

Opium Examiner.

BENARES OPIUM AGENCY,

The 189

TRIPLICATE.

BENARES OPIUM AGENCY.

Parakh slip of *Opium challan No.*
of Sub-Division

DISTRICT PARAKH.	Number of Jars.	FACTORY PARAKH. Number of Jars.	Class.	Assay result.	Jars on which fines have been imposed.	REMARKS.
Total Jars ...						

Assistant Opium Examiner.

Opium Examiner.

BENARES OPIUM AGENCY,

The 189

FACTORY FORM No. 39.]

BENARES OPIUM AGENCY.

Sub-Division.

{No. of tagars
No. of patris
Parkhia

Challan No.

Number of jar.	Parakh mark.	Penalty for—		Tagar mark.	Consistence or assay.	REMARKS.
		Pussewah.	Other impurities.			

FACTORY FORM No. 40.]

BENARES OPIUM AGENCY.

Register of fines imposed by the Opium Examiner on good opium.

Date.	Subdivision.	Number of challan.	NUMBER OF JAR FINED—		CONTENTS OF JAR FINED—						Rate of fine perseer.	TOTAL AMOUNT OF FINE CALCULATED ROUGHLY—						REMARKS.
			For pussewah.	For other impurities.	For pussewah.			For other impurities.				For pussewah.			For other impurities.			
					M.	S.	CH.	M.	S.	CH.		Rs.	A.	P.	Rs.	A.	P.	

Assistant Opium Examiner.

Opium Examiner.

FACTORY FORM NO. ..]

BENARES OPIUM AGENCY.

Sadr Factory Receipt for Challan Jars and Pots.

NAME OF SUB-DIVISION.	Number of challan.	Jars.	Pots.	Total.	Name of zilladar in charge.	Date of arrival of challan at the Factory.	Date of zilladar's release from the Factory.	REMARKS.

Import Officer.

BENARES OPIUM AGENCY,
SADR FACTORY,
Dated the 189 .

Factory Superintendent.

BENARES OPIUM AGENCY.

Sadr Factory Receipt for Challan Jars and Pots.

NAME OF SUB-DIVISION.	Number of challan.	Jars.	Pots.	Total.	Name of zilladar in charge.	Date of arrival of challan at the Factory.	Date of zilladar's release from the Factory.	REMARKS.

Import Officer.

BENARES OPIUM AGENCY,
SADR FACTORY,
Dated the 189

Factory Superintendent.

FACTORY FORM No. 42.]

BENARES OPIUM AGENCY.

Daily Parakh Report of Jars and Pots.

SUB-DIVISION.	Number of challan.	GOOD OPIUM AND KHURCHAN.				INFERIOR OPIUM.				GOVERNMENT SCRAPINGS.				DISTRICT DHOI.				ASSAMIWAR.				SUSPECTED.				BURNT.				PASSEWA.			
		Number of Jars.	Gross weight.			Number of Jars.	Gross weight.			Number of Jars.	Gross weight.			Number of Jars.	Gross weight.			Number of Jars.	Gross weight.			Number of Jars.	Gross weight.			Number of Jars.	Gross weight.			Number of Jars.	Gross weight.		
			M.	s.	c.		M.	s.	c.		M.	s.	c.		M.	s.	c.		M.	s.	c.		M.	s.	c.		M.	s.	c.		M.	s.	c.

Head Auditor. *Import Officer.*

FACTORY FORM NO. 43.]

BENARES OPIUM AGENCY.

Malkhana Stock Book.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		IMPORT.							EXPORT.							
		Total.	Deductions on account of													
Date.	Balance.	Receipts.	Confiscation.	Adhesion in importing.	Burnt opium transferred for morphia.	Total of columns 4, 5 and 6.	Net opium received in malkhana.	Total of columns 2 and 8.	For provision cakes.	For excise purposes.	For lewah.		Adhesion in exporting.	Total columns 10 to 14.	Balance column 9 minus column 15.	Signature of Malkhana officer.
	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.		M. s. c.	M. s. c.	M. s. c.	

FACTORY FORM No. 44.]

BENARES OPIUM AGENCY.

Assay Register for Challan Opium of season 189 -9

Date.	District Parakh.	Factory Parakh.	Letter or mark on specimen vessels.	Result of Assay.				Consistence at which the opium is to be paid for.	REMARKS.
				1	2	3	Mean.		

FACTORY FORM No. 45.]

BENARES OPIUM AGENCY.

Laboratory Parakh Paper.

Sub-division Opium Challan No.

Number of Pot.	Parakh.	PENALTIES FOR—		THE USE TO WHICH IT IS PUT.			REMARKS.
		Impurities.	Passewa.	Abkari.	Lewa.	Morphia.	

FACTORY FORM No. 46.]

BENARES OPIUM AGENCY.

Register of Pots examined.

1	2	3	4		5	6	7	8	9	10
Date of receipt in laboratory.	Date of Parakh.	Sub-division.	CHALLAN.		Number of pots.	Number of pots confiscated and burnt opium pots released but set aside for morphia.	Number of pots passed for lewa, &c., and transferred to malkhana.	Acknowledgment of malkhana officer for pots in column 7.	Signature of Assistant Opium Examiner for pots in column 6.	REMARKS.
			Description.	No.						

FACTORY FORM NO. 47.]

BENARES OPIUM AGENCY.

Memorandum showing the result of Examination of suspected, burnt and assamiwar opium pots and dhoi for 189 .

1	2	3				4				5				6				7				8				9				10				11
Sub-division.	No. of challan of suspected, burnt or Assamiwar opium or of Dhoi.	Total Factory weight.				Deduct confiscation, including useless Dhoi.				Net opium released.				RESULT OF EXAMINATION OF OPIUM SHOWN IN COLUMN 5.																				REMARKS.
														Consigned for lewa use.				Consigned for abkari use.				Burnt opium set aside for morphia.				District dhoi fit for morphia use.				Total.				
		M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	

ACTORY FORM No. 48.]

BENARES OPIUM AGENCY.

Stock Book of confiscated opium, &c., received for manufacture of alkaloids.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Month and date.	Opening balance.	RECEIPTS.													
		Confiscations of—				Burnt opium released but set aside for morphia.	Confiscated opium from Behar Agency.	District dhoi.	Contraband opium.		Total.	Used for manufacture of morphia.	Balance.	Signature of Assistant Opium Examiner.	REMARKS.
		Good opium.	Assamiwar opium.	Suspected opium.	Burnt opium.										
		M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.		

FACTORY FORM No. 49.]

BENARES OPIUM AGENCY.

Memorandum of Pussewah received into the Factory.

Date.	Sub-division.	No. of challan.	Gross Factory weight.			Standard at 70°.			Daily total.			REMARKS.
			M.	S.	C.	M.	S.	C.	M.	S.	C.	

Head Auditor.

FACTORY FORM No. 50.]

BENARES OPIUM AGENCY.

Register of challans received.

Division.	Sub-division.	Date of receipt.	Date of weighment.	Number of chellan.	Description of opium.	Number of jars.	Number of pots.	Net weight of opium as per sadr outturn.	Opium confiscated.	REMARKS.

Head Auditor.

FACTORY FORM No. 51.]

BENARES OPIUM AGENCY.

No. Audit

Review statement showing the result of Factory weighment of opium jars of challan No. of Subdivision for season 189 -9 .

1	Total number of jars received ...	
2	Gross kothi weight	
3	Do. Factory weight ...	
4	Jars showing large difference by Factory weighment ...	
5	Details of mistakes, &c., found in the chalan	

Forwarded to the Sub-Deputy Opium Agent of for information and return with explanation on the reverse.

BENARES OPIUM AGENCY;
The 189 . } *Head Auditor.* *Factory Supdt.*

BENARES OPIUM AGENCY.

No. Audit

Review statement showing the result of Factory weighment of opium jars of challan No. of Subdivision for season 189 -9

1	Total number of jars received ...	
2	Gross kothi weight	
3	Do. Factory weight ...	
4	Jars showing large difference by Factory weighment ...	
5	Details of mistakes, &c., found in the chalan	

Forwarded to the Sub-Deputy Opium Agent of for information and return with explanation on the reverse.

BENARES OPIUM AGENCY;
The 189 . } *Head Auditor.* *Factory Supdt.*

No.

DIVISION.

Dated 189

To

FACTORY SUPERINTENDENT,

BENARES OPIUM AGENCY, GHAZIPUR.

BEGS to return the review statement of challan No. of Subdivision with the following explanations required therein.

Sub-Deputy Opium Agent.

FACTORY FORM No. 52.]

BENARES OPIUM AGENCY.

Daily Register of challan opium passed by the Audit office for 189 -9

DATE.	Sub-division.	No. of challan.	Opium as per challan.			Factory weight.			Confiscation.			Damdata outturn.				REMARKS.
			M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	K.	

N

FACTORY FORM No. 53.]

BENARES OPIUM AGENCY.

Daily report of progress of standard computation of challans.

Balance of challans on date of last report.	Received this day.	Total.	Finished and sent to Factory Superintendent.	Balance.

The 189 *Head Auditor.*

FACTORY FORM No. 54.]

BENARES OPIUM AGENCY.

Daily Register of scrapings from challan jars.

DATE.	No. of jars received into malkhana.	No. of coolies employed for scraping.	Weight of scrapings obtained at 9 a. m.	Weight of scrapings obtained at 4 p. m.	Total scrapings for the day.	Average per man.	REMARKS.

FACTORY FORM No. 55.]

BENARES OPIUM AGENCY.

Lewakhana Assay Register, season 189 -9

DATE.	Description of opium, viz, lewa, dhoi, pussewah, &c, sent for assay.	Number of vat from which samples drawn.	CONSISTENCE TESTS,			Mean of tests.	REMARKS.
			First.	Second.	Third.		

Assistant in charge, Lewakhana. *Assistant Opium Examiner.*

FACTORY FORM No. 56.]

BENARES

Stock Book of Opium, &c., received

1	2	3						4						5						6			
MONTH AND DATE.	Details.	OPIUM FROM MALKHANA.						CONTRABAND OPIUM.						MISCELLANEOUS OPIUM.						PUSSEWAH PARAKH GRO			
		Gross opium.			Consistence.	Reduced to 52·50°.		Gross opium.			Consistence.	Reduced to 52·50°.		Gross opium.			Consistence.	Reduced to 52·50°.		Pussewah.			Consistence.
		M.	S.	C.		M.	S. C.	M.	S.	C.		M.	S. C.	M.	S.	C.		M.	S. C.	M.	S.	C.	

OPIUM AGENCY.

for manufacture of Lewa.

	7						8						9						10						11
FROM UND.	Washings of jars and pots, &c.												Washings of cake-makers, seats.						Total.						
	Old or thick Dhoi.						Thin Dhoi.																		
	Gross.			Consistence.			Reduced to 52·50°.			Gross.			Consistence.			Reduced to 52·50°.			Gross.			Consistence.			Reduced to 52·50°.			Gross opium &c.			Reduced to 52·50°.			Remarks.
M.	s.	c.	M.	s.	c.		M.	s.	c.	M.	s.	c.		M.	s.	c.	M.	s.	c.	M.	s.	c.		M.	s.	c.	M.	s.	c.	

FACTORY FORM No. 57.]

BENARES OPIUM AGENCY.

No.

Lewah Assay Certificate.

Vat No.	Number of specimen.	Consistence.	Average.
	1		
	2		

The *of* 189

Assistant Opium Examiner.

BENARES OPIUM AGENCY.

No

Lewah Assay Certificate.

Vat No.	Number of specimen.	Consistence.	Average.
	1		

The *of* 189

Assistant Opium Examiner.

FACTORY FORM No. 58.]

BENARES OPIUM AGENCY.

Indent for Lewa.

Date.	Number of cakes to be manufactured, sattaied or repaired.	Calculated quantity at chittacks per cake.				Excess for adhesion at 4 per cent.				Total quantity of lewa required.				REMARKS.
		M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	

Factory Superintendent. *Asst. Factory Superintendent.* *Assistant in charge.*

FACTORY FORM NO. 59.]

BENARES

Stock Book of

1	2	3	4	5	6	7	8	9	10
MONTH AND DATE.	Opening balance, at 52·50°.	Received, at 52·50°.	Total of columns 2 and 3, at 52·50°.	EXPENDITURE @ 52·50° FOR —					Closing balance, columns 4 minus 9.
				Manufacture as per column 16.	Sattai.	Repairs.	Petty repairs.	Total, columns 5 to 8.	
	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.

OPIUM AGENCY.

Lewa Manufactured.

11	12	13	14	15			16			17			18			19
	For Sattai and repairs.			Details of expenditure @ 52·50°.												
Number of cakes manufactured.	Number of cakes sattaied.	Number of cakes repaired.	Total of columns 12 and 13.	Regulated allowance of 44 chittacks per cake as per column 11.			Actual expenditure column 5. Mins column 5 of stock book of material for lewa (lewa returned.)			Used less, column 15 minus 16.			Used excess, column 16 minus 15.			Remarks.
				M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	

FACTORY FORM NO. 60.]

BENARES OPIUM AGENCY.

Memorandum of Export Assay on the 189 *for caking.*

Vat letter.	Vat consistence.	Number of specimen.	Assay.	Average.	Quantity to be exported		Vat letter.	Vat consistence.	Number of specimen.	Assay.	Average.	Quantity to be exported.		Vat letter.	Vat consistence.	Number of specimen.	Assay.	Average.	Quantity to be exported,	
					MDS.	S.						MDS.	S.						M.	S.
		1							1							1				
		2							2							2				
		3							3							3				
		1							1							1				
		2							2							2				
		3							3							3				
		1							1							1				
		2							2							2				
		3							3							3				
		1							1							1				
		2							2							2				
		3							3							3				
		1							1							1				
		2							2							2				
		3							3							3				
		1							1							1				
		2							2							2				
		3							3							3				
		1							1							1				
		2							2							2				
		3							3							3				
	Total to be exported mds. (in words)																			

BENARES OPIUM AGENCY,
The 189 .

Total of Assay ...
Average Assay ...

Asst. Opium Examiner. *Asst. Superintendent.* *Factory Superintendent.*

For Lewah.

Vat letter.	Vat consistence.	Number of specimen.	Assay.	Average.	Quantity to be exported. Mds.	s.
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				

Total to be exported mds. (in words) ...

For Abkari.

Vat letter.	Vat consistence.	Number of specimen.	Assay.	Average.	Quantity to be exported. Mds.	s.
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				
		1				
		2				
		3				

Total to be exported mds. (in words) ...

BENARES OPIUM AGENCY,
The 189 .

Total Assay ...
Average Assay ...

Assistant Opium Examiner.

Total Assay ...
Average Assay ...

Assistant Superintendent.

Factory Superintendent.

FACTORY FORM No. 61.]

BENARES OPIUM AGENCY.

Register of tickets to be printed for caking.

Vat letter.	Maunds to be exported from the vat.	Number of tickets required.	
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			
K			
L			
M			
N			
O			
P			
Q			
R			
S			
T			
U			
V			
W			
X			
Y			
Z			

Assistant Superintendent:

FACTORY FORM No. 62.]

189 -9 .

Export Ticket.

Vat.	Weight of opium.	Number.
	Seers.	

FACTORY FORM No. 63.]

BENARES OPIUM AGENCY.

Malkhana Export of Opium for *in season* 189

Number of vat.	Class.	Assay.	Gross weight.			Number of tickets per vat.
			Mds.	s.	c.	

Tagars used in exporting ...
Adhesion at—chittacks per tagar ...

FACTORY FORM No. 64.]

BENARES OPIUM AGENCY.

Export for Abkari *season* 189 -9 .

NOTE.—For lewa export alter the consistence in columns 7 and 8 to 52·50°.

DATE.	Quantity exported.			Assay.	Gross quantity exported up to date.			Quantity exported reduced to 70.°				Total quantity exported up to date reduced to 70°.				Daily export reduced to 90°.				Total export up to date reduced to 90°.				REMARKS.
	M.	S.	C.		M.	S.	C.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	

FACTORY FORM No. 65.]

BENARES OPIUM AGENCY.

Caking results and expenditure of provision Opium 189

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Month and date.	Gross quantity exported on previous day for this day's caking.	Total quantity exported for caking.	Assay of opium when exported.	Quantity exported reduced to 70° consistence.	Total quantity exported reduced to 70° consistence.	This days's caking vat consistence.	Number of cakes made.	Total number of cakes made up to date.	Quantity of opium used in the cakes at caking vat assay @ 1 seer 7½ chittacks each cake.	Quantity of pots, sticks, etc., removed in searching caking opium.	Loss on adhesion to tagars in caking-room.	Total obtained in adding of columns 10, 11 and 12.	Difference on deducting column 13 from column 2—drynge.	Total amount drynge up to date.	Loss on caking over standard.	Total amount of loss up to date.	REMARKS.
	M. S. C.	M. S. C.		M. S. C. K.	M. S. C. K.				M. S. C. K.	M. S. C. K.	C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	M. S. C. K.	

FACTORY FORM No. 66.]

BENARES OPIUM AGENCY.

Caking Vat Assay Certificate No. ———

VAT.	SPECIMEN. No.	SPECIMEN. Consistence.	Average.
No. 1	1		
	2		
No. 2	3		
	4		
No. 3	5		
	6		
No. 4	7		
	8		
No. 5	9		
	10		

Total

Mean average

General vat average

Assistant Opium Examiner.

DATED

189

FACTORY FORM No. 67.]

BENARES OPIUM AGENCY.

MANUFACTURING SEASON 189 -9

Register showing number of bad Cakes made by the Cake-makers during ———————— 18

No. of Cake-maker.	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.	12th.	13th.	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	24th.	25th.	26th.	27th.	28th.	29th.	30th.	31st.	Monthly Total.	REMARKS.

FACTORY FORM NO. 68.]

BENARES OPIUM AGENCY.

SEASON MANUFACTURE, 189 -9

Register of Provision Opium Cakes made this day by each Cake-maker of the Sadr Factory, Ghazipur.

Dated——————————-189

Number.	NAMES OF CAKE-MAKERS.	Cakes made.	Number.	NAMES OF CAKE-MAKERS.	Cakes made.	Number.	NAMES OF CAKE-MAKERS.	Cakes made.
1			31			61		
2			32			62		
3			33			63		
4			34			64		
5			35			65		
6			36			66		
7			37			67		
8			38			68		
9			39			69		
10			40			70		
		—	—		—	—		
11			41			71		
12			42			72		
13			43			73		
14			44			74		
15			45			75		
16			46			76		
17			47			77		
18			48			78		
19			49			79		
20			50					
		—	—					
21			51					
22			52					
23			53					
24			54					
25			55					
26			56					
27			57					
28			58					
29			59					
30			60					

Total number of cakes made ...

I certify that the cakes entered against each cake-maker have been counted by me personally, and that the additions have been made by me.

Assistant in Charge.

FACTORY FORM NO. 68.]

BENARES OPIUM AGENCY.

Daily register of cakes manufactured at the Sadar Opium Factory, Ghazipur, during season 189 -9

Section *Assistant in charge* *Date* 189

Serial number of cake-makers in the section.	NAME AND CASTE OF EACH CAKE-MAKER.	Number of cakes made this day.	Number of bad cakes.	Deduction on account of bad cakes, at two cakes for each bad cake.	Balance of cakes for which payment should be made.	REMARKS.
1	2	3	4	5	6	7
	Total ...					

I CERTIFY that the cakes entered in column 3 against each cake-maker have been counted by me personally, and that the total of the column has been struck by me.

Section Assistant.

I CERTIFY that the figures in column 4 have been entered by me after careful personal examination of the cakes of each cake-maker.

Examining Assistant.

3-5-94.

FACTORY FORM No. 69.

FACTORY FORM No. 69.]

BENARES OPIUM AGENCY.

Cake-maker's No. *Name* *Cake-maker's No.* *Name* *Cake-maker's No.* *Name*

Date.	189 April.	189 May.	189 June.	189 July.	Date.	189 April.	189 May.	189 June.	189 July.	Date.	189 April.	189 May.	189 June.	189 July.
1					1					1				
2					2					2				
3					3					3				
4					4					4				
5					5					5				
6					6					6				
7					7					7				
8					8					8				
9					9					9				
10					10					10				
11					11					11				
12					12					12				
13					13					13				
14					14					14				
15					15					15				
16					16					16				
17					17					17				
18					18					18				
19					19					19				

20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
Total				

Posting and additions made by clerk.

Total number of cakes made ... ...

Deduct for working days at 60 cakes per day ... ...

Excess for payment ... ...

Head Clerk, Factory Supdt's. Office.

20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
Total				

Posting and additions made by clerk.

Total number of cakes made ... ...

Deduct for working days at 60 cakes per day ... ...

Excess for payment ... ...

Head Clerk, Factory Supdt's. Office.

20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
Total				

Posting and additions made by clerk.

Total number of cakes made ... ...

Deduct for working days at 60, cakes per day ... ...

Excess for payment ... ...

Head Clerk, Factory Supdt's. Office.

FACTORY FORM No. 70.]

BENARES OPIUM AGENCY.

Daily account of Cakes manufactured and sent to No. godown, season

Date.	Number of cakes made over each day to the godown.	Total number of cakes up to date.	Assay of this day's receipts.	Signature of receiving officer.

FACTORY FORM No. 71.]

BENARES OPIUM AGENCY.

Stock Book of Provision Opium Cakes, 189 -9 .

1	2	3	4	5	6	7	8	9	10	11
Month and date.	Opening balance.	RECEIPTS.			Total column 2 plus column 5.	EXPENDITURE.			Closing balance, column 6 minus column 9.	REMARKS.
		From Caking Department.	From elsewhere, see column 11.	Total receipts, column 3 plus column 4.		Packed for despatch.	Otherwise disposed of, see column 11.	Total expenditure, column 7 plus column 8.		

FACTORY FORM NO. 72.]

BENARES OPIUM AGENCY.

No.

Statement showing Weight of 100 *cakes received into No.* *Cake Godown* *on the morning after manufacture.*

Month and Date.	Nos.	Weight. S.	C.	K.	Nos.	Weight. S.	C.	K.
	1				51			
	2				52			
	3				53			
	4				54			
	5				55			
	6				56			
	7				57			
	8				58			
	9				59			
	10				60			
	11				61			
	12				62			
	13				63			
	14				64			
	15				65			
	16				66			
	17				67			
	18				68			
	19				69			
	20				70			
	21				71			
	22				72			
	23				73			
	24				74			
	25				75			
	26				76			
	27				77			
	28				78			
	29				79			
	30				80			
	31				81			
	32				82			
	33				83			
	34				84			
	35				85			
	36				86			
	37				87			
	38				88			
	39				89			
	40				90			
	41				91			
	42				92			
	43				93			
	44				94			
	45				95			
	46				96			
	47				97			
	48				98			
	49				99			
	50				100			
				Total ...				

Average weight of cakes ...

Maximum Weight ...
Minimum „ ...

BENARES OPIUM AGENCY;
The 189

Assistant in charge.

FACTORY FORM No. 73.]

BENARES OPIUM AGENCY.

Cake Godown ... ...
Block ... ...
Section ... ...
Number of cakes in section ...
Date of manufacture ... ...
Date of receipt in Godown ...

Cake Godown ... ...
Block ... ...
Section ... ...
Number of cakes in section ...
Date of manufacture ... ...
Date of receipt in Godown ...

Date and month of turning.	Position of cakes.	Initial of Assistant.	REMARKS.	Date and month of turning.	Position of cakes.	Initial of Assistant.	REMARKS.

FACTORY FORM NO. 74.]

BENARES OPIUM AGENCY.

No. *Cake Godown Diary of the operations carried on during the month of*

Month and date.	Balance of cakes in godown.	RECEIVED THIS DAY.		Total of cakes in the godown.	Issues.	Balance in godown.	Number of cakes turned daily.	CAKES REPAIRED.				Expenditure of lewa (for petty repairs).		Expenditure of leaf (for petty repairs).		CUPS USED.		COST FOR CARE OF CAKES.				REMARKS.
		New cakes.	Rejections from scales.					Number grub-eaten.	Fractured or otherwise damaged.	Wetted by rain.						For turning.	For sattai.	Men at Re. 0-1-6.	Boys at Re. 0-1-3.	Boys at Re. 0-1.	Amount.	
										Much.	Slightly	S.	C.	S.	C.						Rs. A. P.	

FACTORY FORM No. 75.]

BENARES OPIUM AGENCY.

Daily report of sattai and repairs, season 189 -9 , *dated* 189

Number of godown.	Number of cakes sattaied this day.	Total cakes sattaied previously.	Grand total of cakes sattaied.	NUMBER OF CAKES. Repaired this day.	Kussed this day.	Repaired previously.	Kussed previously.	Grand total of cakes repaired and kussed.	Lewah expended in repairs and kussing.	Lewah expended in sattai.	Total lewah expenditure.	Leaves expended in sattai this day.	Leaves expended in repairs this day.	Total leaf expenditure this day.
1														
4														
5														
8														
9														
10														
11														
12														
									Deduct wastage.					
									Ditto atmospheric moisture.					
									Net leaf expenditure.					
									Total cakes manufactured.					
									Number sattaied and repaired to date.					
									Remaining.					

	Chs.	K.	D
Authorized expenditure of leaves per cake ...	0	2	25
Actual ditto ditto ...			
Difference ...			
Authorized expenditure of lewah per cake ...			
Actual ditto ditto ...			
Difference ...			

	Mds.	S.	CH.	K.	D
Weight of 40 cakes before sattai					
Ditto after do.					
Excess ...					
Weight of 40 cakes before repairs					
Ditto after do.					
Exces ...					

BENARES OPIUM AGENCY;
SADR FACTORY,
The 189 .

Assistant Superintendent.

Factory Superintendent.

Daily report of packing stores, dated 189

	In store.	Received this day.	Expended this day.	Balance in hand.	Remarks.
Provision chests ... No.					
Provision lids ... No.					
Provision partitions No.					
Provision mats ... No.					
Gunny covers ... No.					
Cloth ... ... Yds.					
Nails ... ... Mds.					
Twine ... ... Mds.					

Benares Opium Agency;
Sadr Factory,
The 189

Factory Superintendent.

FACTORY FORM No. 76.

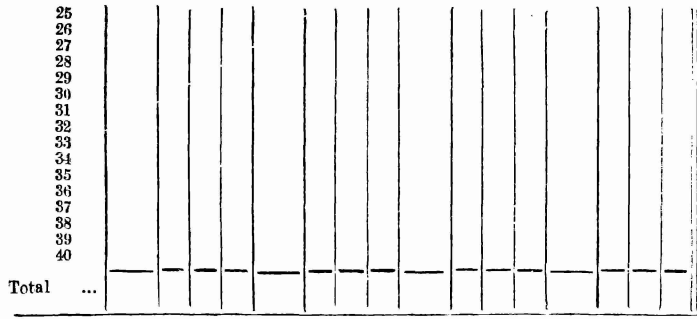
FACTORY FORM No. 76.]

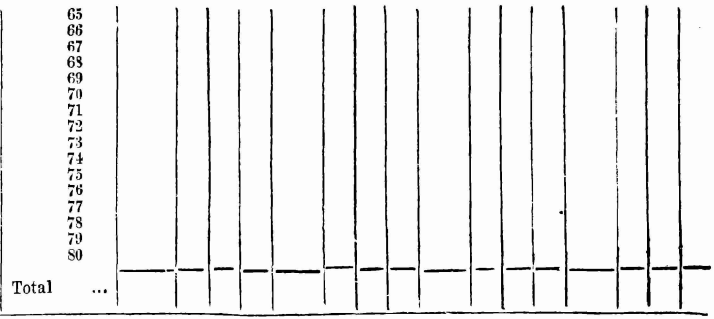
BENARES OPIUM AGENCY.

No. *Godown statement showing the weight of* 80 *cakes.*

Section Month Season 189

No.	Class I.				Class II.				Class III.				Class IV.				No.	Class I.				Class II.				Class III.				Class IV.			
	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.		M.	S.	C.	K.	M.	S.	C.	K.	M	S.	C.	K.	M.	S.	C.	K.
1																	41																
2																	42																
3																	43																
4																	44																
5																	45																
6																	46																
7																	47																
8																	48																
9																	49																
10																	50																
11																	51																
12																	52																
13																	53																
14																	54																
15																	55																
16																	56																
17																	57																
18																	58																
19																	59																
20																	60																
21																	61																
22																	62																
23																	63																
24																	64																





ABSTRACT.

Class.	No. of Cakes.	Weight. M.	s.	c.	k.	Remarks.
I						
I						
III						
IV						
Total ...						
Last week's total ...						
Dryage						

Class.	No. of Cakes.	Weight. M.	s.	c.	k.	Remarks.
I						
II						
III						
IV						
Total ...						
Last week's total ...						
Dryage						

Assistant in charge.

FACTORY FORM No. 77.]

BENARES OPIUM AGENCY.

Memorandum of cakes wetted by leakage of season 189 -9 *on* 189

Name of Cake Godown.	Much wetted.	Slightly wetted.	Total.	Signature of officer.	REMARKS.
No. 1 Cake Godown ...					
No. 2 ditto ...					
No. 3 ditto ...					
No. 4 ditto ...					
No. 5 ditto ...					
No. 6 ditto ...					
No. 7 ditto ...					
No. 8 ditto ...					
No. 9 ditto ...					
No. 10 ditto ...					
No. 11 ditto ...					
No. 12 ditto ...					
Total ...					
Brought forward ...					
Total up to date ...					

Addition checked.

Officer in charge, P. W. Dept. *Head Clerk.* *Asst. Supdt.* *Factory Supdt.*

FACTORY FORM No. 78.]

No.———— Scale No.————

Season 189 -9 .

BENARES OPIUM.

40 Cakes of Consistence $\frac{70}{100}$ Indian Mds. 2 srs. ch.
Benares Agency, the of 189

Weighed and Packed before me.

Assistant. *Agent.*

FACTORY FORM No. 79.]

BENARES OPIUM AGENCY.

Account of stores used for dammering and packing of provision chests, season 189 -9

MONTH AND DATE.	CHESTS DAMMERED.		YARDS OF CLOTH.		COAL PITCH.						COMMON OIL.						WOOD.						CHESTS WITH LIDS AND DIVISIONS PACKED.		BAMBOO MATS.	
	Daily.	Total.	Daily.	Total.	Daily.			Total.			Daily.			Total.			Daily.			Total.			Daily.	Total.	Daily.	Total.
					M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.				

MONTH AND DATE.	GUNNY IN SETS.		NAILS 3″ AT THE RATE OF 15 PER CHEST.						NAILS 2½″.						NAILS 2″.						TWINE.				NAILS DOUBLE POINTED.		REMARKS.
	Daily	Total.	Daily.			Total.			Daily.			Total.			Daily.			Total.			Daily.			Total.			Daily.	Total.	
			M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.			

FACTORY FORM No. 80.]

BENARES OPIUM AGENCY.

Trash Assay and Weather Register for Packing, 189 -9

DATE.	THERMOMETER.						WIND.		SKY.		TRASH.							Officer's signature.
	Before.			After.			Direction.		At		Weight.							
	Packing.																	
	Dry.	Wet.	H.	Dry.	Wet.	H.	Before.	After.	10 A.M.	3 P.M.	Before.			After.			Loss in kachas.	
	Bulb.			Bulb.			Packing.				Drying.							
											S.	C.	K.	S.	C.	K.		

FACTORY FORM No. 81.]

BENARES OPIUM AGENCY.

Register of packing weight of Provision Opium, season 189 -9

Date of packing.	Number of scale.	Number of chests packed and tickets issued.	Number of tickets at each scale.	Total for the day.	Packing weight for the day.			Consistence of cakes.	Signature of Assistant Superintendent and Factory Superintendent.
					Mds.	s.	c.		

FACTORY FORM No. 82.]

BENARES OPIUM AGENCY.

Register showing result of examination of packed Chests of season 189

Date.	Number of chest.	Number of scale.	Packing weight of the day.			Weight of cakes.						Weight of trash and bag.		Deduct weight of bag.		Net weight of trash.		Total weight of trash in chest.		Any faults which may be observed in the packing, &c.	Signature of officer making the examination.
						Upper layer.			Lower layer.			Upper layer.	Lower layer.			Upper layer.	Lower layer.				
			Mds	s.	c.	Mds.	s.	c.	Mds.	s.	c.			S.	c.			S.	c		

FACTORY FORM No. 83.]

Account of packing and weighing *Chests of Benares Opium for season* 189 -9

Number of chests.	Consistence.	Date of packing.	Number of scale.	Cakes examined by	Weighed by	Packed by	Weight of 20 cakes in each scale.	Total weight of the 40 cakes.	Signature of officer who signed tickets and in whose presence cakes were packed.

BENARES OPIUM AGENCY;
The 189 .

Assistant Superintendent.

Factory Superintendent.

FACTORY FORM No. 84.]

No.

Daily Register of Cakes packed for season 189 -9

Date.	Number of scale.	NUMBER FOUND DEFECTIVE AND REJECTED WITH PARTICULAR DEFECTS.				Number of sound cakes packed.	Signature of officer at scale.
		1. For slight bruises.	2. For being grub-eaten.	3. Soft.	Total.		
Total ...							
Brought forward ...							
GRAND TOTAL ...							

BENARES OPIUM AGENCY;
SADR FACTORY,
The 189

Assistant Superintendent.

Factory Superintendent.

FACTORY FORM NO. 85.]

No. , *dated the* 189

SEASON 189 -9

BENARES OPIUM AGENCY.

SADR FACTORY.

Certificates of the Packing Assistants.

CERTIFIED that the packing at the scales was conducted strictly according to the rules laid down for my guidance in Section (V), Chapter VII of the Opium Manual, Part III.

Packing at Nos. 1 & 2 scales began	at	a.m.
Ended	at	p.m.
Packing at Nos. 3 & 4 scales began	at	a.m.
Ended	at	p.m.

Assistant in charge, Nos. 1 & 2 scales. *Assistant in charge, Nos. 3 & 4 scales.*

	Name of mate, sirdar.	Name of native, purkhia.
CERTIFIED that the packing of upper layer of cakes was conducted by me strictly in accordance with rules laid down for my guidance in section (VI), Chapter VII of the Opium Manual, Part III. The packing room was quitted by us on the close of work at p.m.		

Signature of two Assistants.

CERTIFIED that the nailing down of packed chests was conducted by me strictly in accordance with rules laid down for my guidance in section (VII), Chapter VII of the Opium Manual, Part III.

The nailing down of chests was finished at p.m.

Signature of Assistant.

CERTIFIED that the examination of the packed dammered chests was conducted by me strictly in accordance with rules laid down for my guidance in section (VIII), Chapter VII of the Opium Manual, Part III.

Dammering was finished at p.m. The chests noted below were found damaged, and owing to the lateness of the hour were allowed to stand over for repairs till the next morning.

The sewing of covers on chests Nos. to was done under my strict supervision, and the chests tallied by me.

Assistant in charge.

CERTIFIED that the packing operations this day have been conducted strictly according to the rules laid down in the Opium Manual; that the packing room containing packed chests was secured for the night at P.M., under my personal supervision, and that the key of the outer lock has been retained in my possession.

Assistant Superintendent.

FACTORY FORM NO. 86.]

BENARES OPIUM AGENCY.

Tally Sheets of Provision Opium Chests despatched.

FACTORY FORM No. 87.]

BENARES OPIUM AGENCY.

No.

Abstract of gross weighment of Provision Opium Chests of 189 -9 *despatched by Rail to the Presidency.*

Date of weighment in the Factory.	Despatch.	Total number of chests.	Number of chests at 5 per cent. or 25 from 500 chests.	Weight of each chest.	Average weight of 500 chests.	REMARKS.
		Total gross maunds ...				

Assistant in Charge.

FACTORY FORM No. 88.]

BENARES OPIUM AGENCY.

Examination of Ferry boats for conveying Provision Opium Chests of season 189 -9

Date of examination.	Number on boat.	Number of boat.	State of boat.	Number of chests loaded.	Daily total.	Name of contractor.	Signature of examining officer.	REMARKS.

FACTORY FORM No. 89.]

BENARES OPIUM AGENCY.

SEASON 189 -9

Received from the Factory Superintendent, Benares Opium Agency, Ghazipur, for conveyance to station chests of provision opium of season 189 -9 *in sound condition, as detailed below:—*

Boat number.	Number of chests contained in each boat.	Signature of assistant on duty.	Signature of contractor receiving the chests.
No.			
No.			
No.			
No.			
No.			
No.			
No.			
No.			
Making a total of ...			
	From No. to No.	Chests ...	

Signature of Contractor.

Date 189

FACTORY FORM No. 90.]

BENARES OPIUM AGENCY.

Report of the Assistant detailed for duty at *superintending opium despatches of season* 189 -9 .

I	Number of chests crossed over and put in waggon, from No. to No.	I	
II	Condition of chests and any defects found and how remedied, giving the numbers of the chests found defective.	II	
III	Were the police guard on active duty between boats and waggons ?	III	
IV	Was the road in good order ?	IV	
V	Did the contractors carry out their duties satisfactorily without damage to the chests ?	V	
VI	Was the police-guard over the waggons on duty and on the alert, and did you personally seal the waggons and see them locked ?	VI	
VII	Have you anything else to report ?	VII	

Factory Superintendent,
Benares Opium Agency.

Assistant in charge at

The 189

FACTORY FORM NO. 91.]

BENARES OPIUM AGENCY.

No. Opium season 189 -9

RECEIVED from the Assistant in charge at station the following, viz., waggons, locked and sealed, said to contain chests of Benares provision opium of 189 -9 ; also iron padlocks with keys.

Head constable of Police.

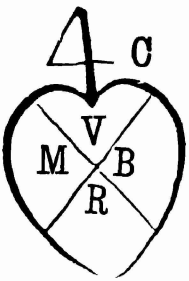
Signature of constables proceeding with the despatch ... { Headconstable ₹ / Constable ₹ / Ditto ₹

The STATION, 189 . } Signed in my presence.

Assistant on duty.

Form of Invoice to accompany consignments of Provision Opium from the Factory to the Board of Revenue.

———————OPIUM AGENCY.



No. SEASON.

Dated the *19*

Invoice of chests of provision opium despatched this day for transport by rail to the Presidency and consigned to the Board of Revenue, L. P., Calcutta, being on account and risk of His Majesty's Indian Government, marked and numbered as per margin.

NOTE.—*Each chest contains 40 cakes.*

Numbers marked on chests.	Number of chests despatched.	Date of packing the chests.	Net weight of the 40 cakes in each chest at 80 tolas per seer.			REMARKS.
			Mds.	Srs.	Chs.	
Nos. to Nos. to						

Certified that the prescribed orders regarding the packing and despatch of the chests of opium covered by the above invoice, have been strictly fulfilled by myself and the other officers of the Factory.

(Sd.)

Opium Agent.

(Sd.)

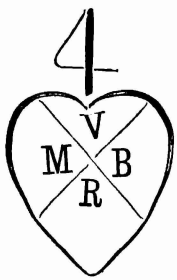
Factory Superintendent.

FACTORY FORM No. 92.]

No. SEASON 189 -9

Benares Opium Agency, the 189

B. O. A.



Invoice of chests of Benares opium despatched this day to for transport to Howrah by rail to the Presidency, and consigned to the members of the Board of Revenue, Fort William, being on account and risk of Her Majesty's Indian Government, marked and numbered as per margin.

	Mds.	s.	ch.
Benares Opium chests containing as per accompanying packing account No. 80 tolahs maund			

Memorandum of the Benares opium included in this Invoice and despatched on the above stated date.		REMARKS.
	Chests.	

CERTIFIED that the orders prescribed for my guidance in packing and despatching the chests of opium, viz., have been strictly fulfilled as relates to the opium in this Invoice by myself and other officers of the Factory.

Factory Superintendent.

Opium Agent.

FACTORY FORM No. 93.]

No. SEASON 189 -9

I DO hereby certify that the despatch of Benares provision opium of 189 -9 , comprising chests, each chest containing forty cakes or balls forwarded to the Presidency by rail is to the best of my knowledge and belief pure and genuine opium, the instructions of the Board of Revenue for preventing the adulteration of it having to the utmost of my power been strictly observed, and further that the quantity of opium allowed in making the cakes was as follows :—

	80 tola weight.		
	M.	S.	CH.
Opium put into each chest at the consistence of 70° per cent.			
Opium used for pasting the leaves of the envelopes at a consistence of 52-5° per cent.			
Total ...			

I do also certify that the quantity of poppy leaves used in the formation of the envelopes, inclusive of all subsequent repairs, has been about seers and chittacks 80 tola weight, that proportion having been judged the fittest for the preservation of the drug.

BENARES OPIUM AGENCY ;
The ——————— 189 . } *Factory Superintendent.*

Opium Agent.

Form of Certificates as to the Quantity and Quality of the Provision Opium covered by the above Invoice.

_____OPIUM AGENCY.

No. SEASON.

Dated the *19*

CERTIFIED that the provision opium covered by the Invoice No. dated the 19 , is to the best of my knowledge and belief pure and genuine opium, the instructions of the Board of Revenue for the prevention of adulteration having to the utmost of my power been strictly observed, and further that the quantity of opium allowed in making the cakes was as follows:—

	At 80 tolas per seer.		
	Mds.	Srs.	Chs.
Opium put into each chest at the consistence of per cent.			
Opium used for pasting the leaves of the envelopes at a consistence of per cent.			
Total ...			

I do also certify that the quantity of poppy leaves used in the formation of the envelopes, inclusive of all subsequent repairs, has been about seers chs. (at 80 tolas to the seer), that proportion having been judged the fittest for the preservation of the drug.

(Sd.)

Opium Agent.

(Sd.)

Factory Superintendent.

20-11-1902.

FACTORY FORM NO. 94.]

No.

SEASON 189

DESPATCH.

Abstract account of the weighment of the contents of *chests*
of Benares Opium of season 189 -9 , *despatched to the Presidency*
by Rail on

Date of weighment.	Number of provision chests.	Numbers noted on the chests.	Number of cakes in each chest.	Weight of the 40 cakes in each chest at 80 tolas per seer.			REMARKS.

BENARES OPIUM AGENCY;
SADR FACTORY,

The 19

Factory Superintendent.

Opium Agent.

FACTORY FORM NO. 95.]

Invoice of gross weight of ... *chests of Benares Opium of*
189 -9 , *despatched on* ... *from Sadr Factory for transport*
to Howrah by Rail.

Number of chests.	Gross weight.			
	Mds.	S.	CH.	

BENARES OPIUM AGENCY,
The 189 .

Factory Superintendent.

Opium Agent.

Factory Assistant.

FACTORY FORM No. 96.]

BENARES OPIUM AGENCY.

SEASON 189 -9 .

Statement showing the number of chests despatched and charges, &c., for the same.

Date of despatch.	Number of chests despatched.	Gross weight of chests.			Freight of ditto at per chest to Howrah.			Hooghly Bridge toll at Re. 1 per 100 maunds.			Freight from Ghazipur to Tarighat station at 4 annas per chest.			Delivery charges of ditto at per maund.			Total charges of each despatch.		
		MDS.	S.	CH.	RS.	A.	P.	RS.	A.	P.	RS.	A	P.	RS.	A.	P.	RS.	A.	P.
	The amount paid by credit Note No.																		

Railway Station.

Factory Assistant despatching.

Station-master.

Opium Agent.

Factory Superintendent.

FACTORY FORM No. 97.]

BENARES OPIUM

Stock-book of Abkari Opium manufactured at and issued from

1	2	3	4	5	6	7	8	9	10
	UNMANUFACTURED ACCOUNT.								
		RECEIPTS.				EXPENDITURE AT 90°.			
MONTH AND DATE.	Opening balance.	Gross quantity exported from malkhana.	Consistence.	Quantity converted to 90°.	Total of columns 2 and 5.	Manufactured into excise cakes.	Quantity struck off as sent to lewa, &c. (quote authority).	Total of columns 7 and 8.	Closing balance, deducting column 9 from 6.
	M. S. C.	M. S. C.		M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.

FACTORY FORM No. 97A.]

Statement showing the quantity of Excise Opium manufactured at, and supplied from, the Ghazipur Opium Factory during the month of _____

4

ACCOUNTS OF UNMANUFACTURED OPIUM.						ACCOUNTS OF MANUFACTURED OPIUM.													
Quantity of crude opium reserved for excise purposes in malkhana on the 1st of the month.	Quantity of crude opium remaining in the Abkari Department on the 1st of the month.	Quantity of crude opium received from malkhana during the month.	Total of columns 2 and 3.	Quantity used for the manufacture of excise opium during the month.	Balance in hand at the close of the month.	Quantity of excise opium in stock at the factory on the 1st of the month.	Quantity of excise opium manufactured during the month.	Total of columns 7 and 8.	Quantity of excise opium supplied from the factory during the month to—					Balance in hand (difference between columns 9 and 14) at the close of the month.	Quantity of excise opium remaining to be supplied on year's indent to—					REMARKS.
									Board of Revenue, Lower Provinces.	North-Western Provinces and Oudh.	Central Provinces.	Punjab.	Total.		Board of Revenue, Lower Provinces.	North-Western Provinces and Oudh.	Central Provinces.	Punjab.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

GHAZIPUR OPIUM FACTORY,

The _____ 1895. *Head Clerk.* *Asst. in charge of Abkari Dept.* *Factory Supdt.*

5-6-95.

AGENCY.

the Sadr Factory *during the year* 189 -9.

11				12				13				14				15				16	17
MANUFACTURED ACCOUNT AT 90°.																					
OPENING BALANCE.				RECEIPTS AS PER COLUMN 7.				TOTAL OF COLUMNS 11 AND 12.				ISSUED.				CLOSING BALANCE, DEDUCTING COLUMN 14 FROM 13.				Initial of officer in charge.	REMARKS.
Chests.	Cakes.	Quantity.		Chests.	Cakes.	Quantity.		Chests.	Cakes.	Quantity.		Chests.	Cakes.	Quantity.		Chests.	Cakes.	Quantity.			
No.	No.	M.	s.	No.	No.	M.	s.	No.	No.	M.	s.	No.	No.	M.	s.	No.	No.	M.	s.		

FACTORY FORM No. 98.]

BENARES OPIUM AGENCY.

Assay Register for Abkari.

Number of caking trays.	Result of Assay.			Average.
	1	2	3	

Factory Superintendent. *Assistant Opium Examiner.*

FACTORY FORM No. 99.]

No.

BENARES OPIUM AGENCY.

ABKARI OPIUM.

Containing cakes Mds. Srs. Chs.

Weighing, at 80 Tolahs,

BENARES OPIUM AGENCY SADR FACTORY,

The *of* 189 . } *Factory Superintendent.*

Opium weighed and packed in my presence.

Assistant.

FACTORY FORM No. 100.]

BENARES OPIUM AGENCY.

SEASON 189 -9

Register of packed chests of Abkari Opium, Sadr Opium Factory.

Date of weighment.	Numbers on the chests.	Number of cakes in each chest.	Net opium contained in each chest at 80-tolah weight.	Weight of cakes contained in each chest, including envelopes at 80-tolah weight.	Gross weight of entire packages at 80-tolah weight.	Average consistence at time of manufacture.	Date of supply.	Number and date of order.	To whom supplied.	Number and date of invoice.	REMARKS.

FACTORY FORM NO 101.]

BENARES OPIUM AGENCY.

Abkari Opium Supply Order-book.

Authority.	Number of order.	To whom supplied.	Quantity.		How to be forwarded.	Date of Factory Superintendent's order.	Signature of Factory Superintendent.	Signature of Assistant in charge, Abkari Department.	Number and date of forwarding memorandum.	Amount of railway freight.	How paid, whether by cash or credit note.	Date of despatch of consignee' receipt in duplicates to Head Accountant's office.	Signature of receiving clerk.
			Mds.	s.									

FACTORY FORM No. 102.]

BENARES OPIUM AGENCY.

No.

Invoice of chests { large / small } of Abkari opium containing Mds seers

despatched on the of 189

Number marked on chests.	Number of cakes.	80-TOLAH WEIGHT.						Rate per seer.	Value.		
		Gross.			Net opium.						
		Mds.	s.	c.	Mds.	s.	c.		Rs.	A.	P.
Total ...											

Head Clerk. *Officer in charge of Abkari Department.* *Factory Superintendent.*

Factory Form No. 102]

BENARES OPIUM AGENCY.

No._____

From

THE FACTORY SUPERINTENDENT,

BENARES OPIUM AGENCY,

To

The_____

_____

*Dated Ghazipur, the*_____ *190*

SIR,

I HAVE the honour to advise you of the despatch by rail on _____ of _____ maunds of opium packed in _____ boxes, being the _____ instalment for the consumption of your district for season 190 -190 .

2. The gross weight of each chest will be found entered on the reverse of this letter, and is to be verified immediately on the receipt of this advice.

3. Your receipt in triplicate for the supply should be forwarded without delay in the attached form.

4. The railway receipt is also attached.

I have the honour to be,

SIR,

Your most obedient servant,

Factory Superintendent.

15-9-1901.

INVOICE.

(NOTE.—A maximum allowance of two seers per chest may be made on account of loss in weight by dryage of the wood between the first weighment of a chest at the Factory and its receipt by the District or Subdivisional Officer.)

Chests (each containing $1\frac{1}{2}$ maunds of opium).

Number.	Weight.			Number.	Weight.		
	Mds.	srs.	ch.		Mds.	srs.	ch.
Total				Total			

Checked by

Assistant,

Clerk *Abkari Department.* *Factory Superintendent*

15-9-1901.

Page 235—

Substitute the accompanying revised form (Factory Form No 103) of receipt for abkari opium *for* the existing form on this page.

15-9-1901.

Factory Form No. 103.]

ORIGINAL.

No.

RECEIPT FOR ABKARI OPIUM.

Received from the Opium Agent of Benares chests containing maunds seers of Abkari Opium for retail sale in the district, the value of which is to be credited to the said Agency at the rate of eight rupees and eight annas per seer of 80 tolas of the consistence of 90 per cent., being in the aggregate rupees

The chests were examined, and their gross weight verified. The gunny-coverings were intact, and the chests had no appearance of having been tampered with. 15-9-1901.

——————— *190* . } Sd. ———————.

FACTORY FORM No. 103.]

ORIGINAL.

No.

Receipt for Abkari Opium.

RECEIVED from the Opium Agent of Benares maunds of Abkari opium for the retail sale of the district, the value of which is to be credited to the said Agency at the rate of seven rupees and four annas per seer of 80 tolahs of the consistence of 90° per cent., being in aggregate rupees

The chests are in sound condition.

The ——————189 .}

DUPLICATE.

No.

Receipt for Abkari Opium.

RECEIVED from the Opium Agent of Benares maunds of Abkari opium for the retail sale of the district, the value of which is to be credited to the said Agency at the rate of seven rupees and four annas per seer of 80 tolahs of the consistence of 90° per cent., being in aggregate rupees

The chests are in sound condition.

The ——————189 .}

TRIPLICATE.

No.

Receipt for Abkari Opium.

RECEIVED from the Opium Agent of Benares maunds of Abkari opium for the retail sale of the district, the value of which is to be credited to the said Agency at the rate of seven rupees and four annas per seer of 80 tolahs of the consistence of 90 per cent., being in aggregate rupees

The chests are in sound condition.

The ——————189 .}

FACTORY FORM No. 104.]

BENARES OPIUM AGENCY.

Statement of Opium supplied for abkari purposes during the month of 189

No.	Season of opium.	To whom supplied.	Quantity of 80 tolahs.			Rate per seer.			Value.		
			Mds.	s.	c.	Rs.	A.	P.	Rs.	A.	P.

BENARES OPIUM AGENCY,

The 189 .

Opium Agent.

FACTORY FORM No. 105.]

BENARES OPIUM AGENCY.

Contraband Opium account of Receipts and Expenditure.

1	2	3	4		5	6						7			8						9			10
Date of receipt of parcel.	Date of receipt of docket.	Designation of transmitting officer.	Number and date of transmitting officer's memorandum.		Number of parcel.	Weight of parcel as per invoice.						Weight of parcel in Opium Examiner's office, Laboratory Department.			Weight of contents as per invoice.						Weight of contents in Opium Examiner's office, Laboratory Department.			Consistence of the opium.
			No.	Date.		Mds.	s.	c.	k.	t.	m.	Mds.	s.	c.	Mds.	s.	c.	k.	t.	m.	Mds.	s.	c.	

11				12				13				14				15				16				17	18	19				
Converted to 70° consistence.				Marketable.				Not marketable.				How disposed of—												Remarks by the Opium Examiner.	Signature of the receiving officer.	Opium Examiner's reply regarding result of examination of the opium.				
												Sent into abkari.				Sent into lewah.				Set aside for morphia.										
Mds.	s.	c.	k.	Mds.	s.	c.	k.	Mds.	s.	c.	k.	Mds.	s.	c.	k.	Mds.	s.	c.	k.	Mds.		c.	k.			No.	Year.	Month.	Date.	

FACTORY FORM No. 106.]

CONTRABAND.

No.

FROM

THE OPIUM EXAMINER, BENARES OPIUM AGENCY,

To

THE

Dated the 189

WITH reference to his memorandum No. , dated 189 , undersigned has the honour to acknowledge the receipt of packets of contraband opium.

The contents weighed here seers chittacks, and consisted of good opium which was passed as marketable.

Opium Examiner.

FACTORY FORM No. 107.]

CONTRABAND.

No.

FROM

THE OPIUM EXAMINER, BENARES OPIUM AGENCY,

To

THE

Dated the 189

WITH reference to your memorandum No. , dated 189 undersigned has the honour to acknowledge the receipt of packets of contraband opium.

The contents weighed here seers chittacks, and were rejected because

Opium Examiner.

FACTORY FORM No. 106A.]

Statement showing the quantity of opium, passewah, &c., received at the Laboratory and expended in the manufacture of alkaloids during the month of _____

Details.	Quantity.				Total.				REMARKS.
1	2				3				4
	Mds.	S.	CH.	K.	Mds.	S.	CH.	K.	
Balance on the 1st of the month, as per Laboratory Stock Book									
Add—Receipts during the month—									
Confiscations of opium									
Burnt opium released, but set aside for morphia									
Contraband opium									
Passewah									
District dhoi									
Confiscated opium or passewah received from Bihar Opium Agency									
Other miscellaneous receipts ...									
Total ...									
Deduct expenditure for manufacture of alkaloids, as per Laboratory Stock Book									
Balance at the close of the month ...									

Head Auditor. *Factory Supdt.* *Opium Agent.*

BENARES OPIUM AGENCY,

Ghazipur, the _____

5-6-95.

FACTORY FORM No 108.]

BENARES OPIUM AGENCY.

Stock-book of Alkaloids manufactured in the Laboratory, Benares Opium Agency.

MONTH AND DATE.	MORPHIA HYDROCHLORAS.															MORPHIA ACETAS.												
	Opening balance.			Manufactured.			Total.			Issued.			Balance.			Opening balance.			Manufactured.			Total.			Issued.			Balance.		
	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.

CODEIN.													NARCOTIN.												Signature of Assistant Opium Examiner.	REMARKS.
Opening balance.			Manufactured.			Total.			Issued.			Balance.			Opening balance.			Manufactured.			Total.			Issued.			Balance.				
lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.	lb	OZ.	DR.		

FACTORY FORM No. 109.]

BENARES OPIUM AGENCY.

Day-book of Stores received at the Sadr Factory.

Date of receipt.	Number of invoice.	From whom received.	Names of articles.	RECEIPTS.				Number of ledger, page.	Initials of store-keeper.	REMARKS.
				No.	Quantity.					
					M.	S.	CH.			

FACTORY FORM NO. 110.]

BENARES OPIUM AGENCY.

Ledger of *received at and issued from the Sadr Factory.*

Dates.		Number of day-book page.		From whom received.	To whom issued.	OPENING BALANCE.				RECEIVED.				TOTAL.				ISSUED.				CLOSING BALANCE.				Initials of store keeper.	REMARKS.
Of receipts.	Of issues.	Receipt.	Issue.			No.	Quantity.			No.	Quantity.			No.	Quantity.			No.	Quantity.			No.	Quantity.				
							M.	S.	CH.		M.	S.	CH.		M.	S.	CH.		M.	S.	CH.		M.	S.	ch.		

FACTORY FORM No. 111.]

BENARES OPIUM AGENCY.

Indent for Articles required from the Store Department for the use of

How supplied.	Articles.	Number required.	Mds.	s.	Chs.

Indenting Officer.

BENARES OPIUM AGENCY; } *Factory Superintendent.*

The 189 . } *Store-keeper.*

BENARES OPIUM AGENCY.

Indent for Articles required from the Store Department for the use of

How supplied.	Articles.	Number required.	Mds.	s.	Chs.

Indenting Officer.

BENARES OPIUM AGENCY; } *Factory Superintendent.*

The 189 } *Store-keeper.*

FACTORY FORM NO. 112.]

BENARES OPIUM AGENCY.

Day-book of Stores issued from the Sudr Factory.

Date of issue.	Number of indent or order.	To whom issued.	Names of articles.	Issues.				Number of ledger page.	Initials of store-keeper.	Remarks.
				No.	Quantity.					
					M.	S.	CH.			

FACTORY FORM No. 113]

BENARES OPIUM AGENCY.

Sub-division _____. *Indent for Stores for Weighments of Season* 189 -9 , *dated* _____

To be prepared in triplicate; one copy to be retained for office record.

1	2				3	4				5		6				7	8
NAMES OF STORES.	REMAINING IN STORE ON 188 , DATE OF LAST INDENT.				Received since on	TOTAL OF COLUMNS 2 AND 3.				UNSERVICEABLE ARTICLES DISPOSED OF.		REMAINING IN STORE.				Number now indented for.	Number allowed on indent.
	Serviceable.	Repairable.	Unserviceable.	Total.		Serviceable.	Repairable.	Unserviceable.	Total.	Sold by auction.	Returned to Sadr Factory.	Serviceable.	Repairable.	Unserviceable.	Total.		
For weighment of Opium and Flower Leaves.																	
Tripods, large, wooden ...																	
,, medium, iron																	
Scale beams, large, 56 inches long.																	
Scale beams, large, 48 inches long.																	
Scale beams, medium, 29½ inches long.																	
Scale pans, wooden, with iron chains, for large beams.																	
Scale pans, copper, for medium beams.																	
Brass weights, 1 maund ...																	
,, ,, 20 seers ...																	
,, ,, 10 ,, ...																	
,, ,, 5 ,, ...																	
,, ,, 3 ,, ...																	
,, ,, 2 ,, ...																	
,, ,, 1 seer ...																	
,, ,, 12 chittacks																	
,, ,, 8 ,, ...																	
,, ,, 4 ,, ...																	
,, ,, 2 ,, ...																	
,, ,, 1 chittack																	
,, ,, ½ ,, ..																	
,, ,, ¼ ,, ...																	
Money-weighing scales ...																	
Brass weight, 50 tolas ...																	
Padlocks, Chubb's Patent, brass, with duplicate keys.																	
,, iron, with single key.																	
Tagars, tin																	

* Number and date of authority for disposal of these articles to be quoted.

Sub-Deputy Opium Agent.

FACTORY FORM NO. 114.]

BENARES OPIUM AGENCY.

Sub-division _____ *Indent for Chemicals and Laboratory Stores, &c., for season* 189 , *dated* _____ .

To be prepared in triplicate ; one copy to be retained for office record.

NAME.	Balance in hand on.	Received since.	Total.	Expended.	REMAINING THIS DAY				Number now under trial for.	Number allowed.
					Serviceable.	Unserviceable.	Repairable.	Total.		
FOR LABORATORY USE.										
Iron stove										
Copper degchis for drying specimens										
Copper saucepans for specimens										
Tin funnels										
Spatulas for drying specimens										
Stands (wood) for funnels ...										
Stands (wood) for test-tubes ...										
White plates										
Glass slips										
Glass beakers										
Glass test-tubes										
Graduated measures tin ...										
Stirring rods										
Nepal paper cut filters										
Alcohol										
Iodine solution (Sheppards) ...										
Liquor ammoniae										
Ditto potassae										
Cupric sulphate (solution) ...										
Ferrous ditto (solution) ..										
Ferric chloride (solution) ...										

Sub-Deputy Opium Agent.

FACTORY FORM NO. 115.]

BENARES OPIUM AGENCY.

Articles supplied to the

From Sadr Factory Benares Opium Agency

As per

Date of despatch.	Number or quantity.	Weight.

Please sign and return.

Factory Superintendent.

FACTORY FORM No. 116.]

BENARES OPIUM AGENCY.

Challan of stores returned into store.

DESCRIPTION OF STORES.	Number of articles returned.	Number and date of original indent on which the stores were received.	Signature of officers returning the stores.	Signature of store-keeper.	REMARKS.

FACTORY FORM No. 117.]

BENARES OPIUM AGENCY.

Detailed Statement of Stores verified.

Date of verification	DESCRIPTION OF STORES.	Book balance on date of verification.	Verified balance.	Increase.	Decrease.	Signature of verifying officer.	REMARKS.

FACTORY FORM No. 118.]

BENARES OPIUM AGENCY.

Statement of sale proceeds of unserviceable articles, &c., of the Sadr Opium Factory.

N.B.—The amount of sale proceeds should before delivery of the articles purchased be recovered from the purchaser, and sent to the Factory Superintendent's Office with the Assistant's Memo. Book for Factory Superintendent's information.

Authority.	Number of sale.	Date of sale.	Name of purchaser.	Quantity or number of articles, &c.	Amount of sale proceeds.			Deduct commission at 5 per cent.			Net amount.			Signature of Assistant.	Number and date of challan by which the amount is credited in the treasury.	Factory Superintendent's signature.
					Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.			

FACTORY FORM NO. 119.]

BENARES OPIUM AGENCY.

No.

Statement showing the articles purchased for the use of Sadr Factory Benares Opium Agency during the month of 189

Name of firms.	Articles supplied.	Cost.	REMARKS.

BENARES OPIUM AGENCY;
SADR FACTORY,
The 189 .

Factory Superintendent.

FACTORY FORM NO. 120.]

BENARES OPIUM AGENCY.

(See paragraph 20 of the Resolution of the Government of India in the Department of Finance and Commerce, No. 185, dated 10th January 1883.)

Estimate of the probable quantity and value of stores required from England for the use of Benares Opium Agency during the official year.

[The cost of the Stores is chargeable to the Imperial head OPIUM.]

1	2			3		
DESCRIPTION OR CLASS OF STORES.	Actual expenditure for three years.			Probable estimated requirement for		
				Quantity.	Rate.	Amount.
	£ s. d.	£ s. d.	£ s. d.			£ s. d.

FACTORY FORM No. 121.]

BENARES OPIUM AGENCY.

Annual Indent on England for Stores required in the Sadr Factory Benares Opium Agency for (*from April to March.*)

1	2	3	4	5	6	7	8	9	10						11	12	13	14
									Values—									
Names of articles.	Revenue to which cost is chargeable (Imperial, &c.)	Imperial head of account or grant to which chargeable.	Established proportion.	How established proportion is calculated.	Number or quantity in store on 1st November.	Number or quantity due on previous indent.	Number or quantity now indented for.	Rate.	Of number or quantity due on previous indent.			Of number or quantity now indented for.			Remarks.	Shipped or under provision.	Proposed to be provided.	Remarks by the Director-General of Stores.
									Rs.	A.	P.	Rs.	A.	P.				

2 1

BENARES OPIUM AGENCY;
SADR FACTORY,
The 189.

Head Auditor. *Factory Superintendent.* *Opium Agent.*

FACTORY FORM NO. 122.]

BENARES OPIUM

(See para. 23 of the Resolution of the Government of India in the *Annual Statement of Expenditure on Stores in the Benares*

(1) Stores manufactured in Europe and obtained through the Secretary of State.		(2) Stores manufactured in Europe, but purchased in India under paragraph 3 of Government of India, Financial Resolution No. 185, dated 10th January 1883.								
				Actual cost in India.			Estimated cost if obtained through India Office.		
Description or class of stores.	Total cost, including charges.	Description or class of stores.	Number or quantity.	Average price or rate.	Incidental charges, carriage, &c.	Total cost.	Average price or rate.	Incidental charges, freight, exchange, &c.	Total cost.

AGENCY.

Department of Finance and Commerce, No. 185, dated 10th January 1883.)

*Opium Agency for the Official Year*_____

(3) Stores manufactured in India and substituted for stores formerly imported through Secretary of State.

Description or class of stores.	Number or quantity.	Actual cost in India.				Estimated cost if obtained through India.			Difference.	
		Average price or rate.	Incidental charges, carriage, &c.	Total cost.		Average price or rate.	Incidental charges, freight, exchange, &c.	Total cost.	Gain.	Loss.
				Of goods obtained from Government factories.	Of goods obtained from private dealers.					

FACTORY FORM NO. 123.]

No._____

BENARES OPIUM AGENCY.

Statement showing the Sale Proceeds of Unserviceable Articles at the Sadr Factory, Benares Opium Agency, during _____ 189 .

Number of sale.	Articles.	Amount of sale.	Deduct commission at Rs. 5 per cent.	Net amount.	Remarks.

BENARES OPIUM AGENCY, SADR FACTORY;
*The*_____ 189 . } *Factory Superintendent.*

FACTORY FORM No 124.]

BENARES OPIUM AGENCY.

Stock book of cups received and expended during the month of 189 .

Month and date.	Balance in store.	RECEIPT.		Total cups in store.	EXPENDITURE.				Balance in store.	REMARKS.
		Cups received.	Daily total.		In caking room.	In cake godowns.	In breakage.	Total expenditure.		
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Tota ...										

BENARES OPIUM AGENCY }
The 189 }

Assistant in charge.

FACTORY FORM No. 125.]

BENARES OPIUM AGENCY.

Cup Ledger.

Contractor's name No. of cups contracted for

Date of receipt.	Number of receipt.	Numbe of cups delivered on each date.	Total for the month.	Total number of cups delivered in previous month.	Grand total of deliveries up to date.	Number required to complete contract.	Value of cups delivered in current month.			Date of current payment.		REMARKS.

FACTORY FORM No. 126.

BENARES OPIUM AGENCY.

Cup Receipt.

No. _____

Received from _____

cups _____

The _____ 189

Assistant in charge.

To be given up at time of payment.

BENARES OPIUM AGENCY.

Cup Receipt.

No. _____

Received from _____, Contractor,

cups (in words) _____

The _____ 189 .

Assistant in charge.

FACTORY FORM NO. 127.]

BENARES OPIUM AGENCY.

GODOWN NO.

Cup Indent.

Date.	Number of cakes to be manufactured, sattaied or turned.	Cups as per authorized scale.	Cups now indented for.	REMARKS.

Indenting Officer.

Assistant Superintendent.

Factory Superintendent.

FACTORY FORM No. 128.]

BENARES OPIUM AGENCY.

FACTORY SUPERINTENDENT'S ORDER No. ____ ; DATED _____ .

Indent for temporary establishments required for _____ .

Work for which the establishment is required.	DESCRIPTION OF WORKPEOPLE, RATE OF WAGES, AND PERIOD OF EMPLOYMENT.				Full number employed last year.	Number already employed this year.	Number now required.	Number sanctioned by Factory Superintendent.
	Carpenters, beldars, women, boys, &c.	Rate of wages.	Period of employment. M.	D.				

IN CAKE GODOWNS—

Note.—Number of cakes in godown when full ____
Ditto ditto this day

Assistant in charge _____

Dated _____

Factory Superintendent.

BENARES OPIUM AGENCY.

FACTORY SUPERINTENDENT'S ORDER No. ____ , DATED _____ .

Indent for temporary establishment required for _____ .

Work for which the establishment is required.	DESCRIPTION OF WORKPEOPLE, RATE OF WAGES, AND PERIOD OF EMPLOYMENT.				Full number employed last year.	Number already employed this year.	Number now required.	Number sanctioned by Factory Superintendent.	Order by Factory Superintendent.
	Carpenters, beldars, women, boys, &c.	Rate of wages.	Period of employ. M.	D.					

Number of cakes in godown when full ____
Ditto ditto this day ____

Assistant in charge _____

Dated _____

Factory Superintendent.

BENARES OPIUM AGENCY.

FACTORY SUPERINTENDENT'S ORDER No. ____, DATED _____

_____ *Department or godown.*

Temporary establishment sanctioned by Factory Superintendent.

Work for which the establishment is required.	Description of workpeople sanctioned, such as carpenters, beldars, &c.	Period of employment.	Number sanctioned by Factory Superintendent.

Assistant in charge _____

Dated _____

Factory Superintendent.

FACTORY FORM No. 129.]

BENARES OPIUM AGENCY.

Cooly Muster Attendance Book for the month of

No.	Names.	Caste.	DATE OF ATTENDANCE.	Total working days.	Rate.	Amount.	Deduction on account of fine, &c.	Net amount payable.	REMARKS.
				M. D.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	

FACTORY FORM No. 130.]

BENARES OPIUM AGENCY.

Factory Muster Roll of Coolie Establishment

of 189 *at* A. M.

DEPARTMENTS.	ESTABLISHMENT ALLOWED.			NO. ACTUALLY PRESENT.			Signature of Assistant.
	Beldars.	Women.	Boys.	Beldars.	Women.	Boys.	

BENARES OPIUM AGENCY;

The 189 .

Factory Assistant.

FACTORY FORM NO. 131.]

BENARES OPIUM AGENCY.

Account of Coolies, &c., wages for the month of 189

For Cake Godowns only.] Manufacturing charges.	Number allowed.	Total Number.	Rate.			Amount.			Deduction on account of fines, &c.			Net amount payable.		
			Rs.	A.	P.									
No. *Cake Godown.*														
Men turning cakes ...			0	1	6									
Boys turning cakes ...			0	1	3									
Boys turning cakes ...			0	1	0									
No. *Cake Godown.*														
Men turning cakes ...			0	1	6									
Boys turning cakes ...			0	1	3									
Boys turning cakes ...			0	1	0									
No. *Cake Godown.*														
Men turning cakes ...			0	1	6									
Boys turning cakes ...			0	1	3									
Boys turning cakes			0	1	0									
No. *Cake Godown.*														
Men turning cakes ...			0	1	6									
Boys turning cakes ...			0	1	3									
Boys turning cakes ...			0	1	0									
Total ...														

NOTE.—The above is the form used for cake godowns. In the other departments of the Factory, a similar form is used, the first column being altered to suit circumstances.

Head Clerk. *Head Auditor.* *Factory Superintendent.* *Assistant in charge.*

FACTORY FORM NO. 132.]

BENARES OPIUM AGENCY.

Temporary Establishment Bill of *Department or Godown for Rs.*

for 189

CERTIFIED that all salaries drawn in former bills have been disbursed in full in my presence to the proper persons named in the acquittance rolls, and that each payment has been attested by me in that register. The undisbursed items of former bills, amounting to Rupees on this date as detailed below, have been deducted from the amount of this bill.

Department or godown.	No. of men.	Bill in which the amount was drawn.	Unclaimed amount. Rs.	A.	P.	Department or godown.	No. of men.	Bill in which the amount was drawn.	Unclaimed amount. Rs.	A.	P.	REMARKS.

SADR OPIUM FACTORY;
The 189 .

Assistant in charge. *Factory Superintendent.*

FACTORY FORM No. 134.]

BENARES OPIUM AGENCY.

Register of Payments.

Date of payment.	Description of Bill.	Amount.			Signature of payee.
		Rs.	A.	P.	

FACTORY FORM No. 134.]

BENARES OPIUM AGENCY.

Deposit Register of undisbursed pay.

Date of deposit.	Challan No.	Particulars of the amount deposited.	Amount deposited.			Signature of depositor.	Signature of Treasurer.	Date of withdrawal.	Signature of payee.
			Rs.	A.	P.				

FACTORY FORM No. 135.]

BENARES OPIUM AGENCY.

SADR FACTORY.

Challan of undisbursed money deposited in the Treasury.

1	2	3	4			5	6	7	8	9	10	11
No.	Date of deposit.	On what account.	Amount of deposit.			Signature of depositor.	Authority of Assistant Factory Superintendent or Factory Superintendent.	Signature of Treasurer or Factory Superintendent's Head Clerk.	Date of withdrawal.	Signature of payee.	Authority of Assistant Factory Superintendent or Factory Superintendent.	REMARKS.
			Rs.	A.	P.							

FACTORY FORM No. 136.]

No.

Report of the Assistant in charge of fire-engines for the week ending the 189 . I have the honor to report that during the week a regular daily muster-roll of the men under my charge, forming the fire-brigade, has been kept up; that the rules regarding night attendance by the fire-brigade men have been strictly observed; that the men were drilled last week

on the day at m.

on the day at m.

that the reservoirs have been daily inspected by me and replenished when necessary; that the fire-engines, under my charge, steam and hand, and extincteurs, and everything appertaining to them, have been duly inspected during the week, and found to be in good order, with the exceptions noted overleaf.

Assistant in charge of Fire-engines.

FACTORY FORM NO. 137.]

BENARES OPIUM AGENCY.

Pass No.

GHAZIPUR,

The ——————— 189

Pass out of the Factory the following :—

Factory Superintendent.

BENARES OPIUM AGENCY.

Pass No.

GHAZIPUR,

The ——————— 189

Pass out of the Factory the following :—

Factory Superintendent.

FACTORY FORM No. 138.]

BENARES OPIUM AGENCY.

I CERTIFY that I visited all the sentries in number, who are posted as per detail on the back, on the night of 189 first at P.M., and again at A.M., and found all on the alert with the following exceptions :—

GHAZIPUR ;
The 189 . } *Assistant on duty.*

FACTORY FORM No. 139.]

BENARES OPIUM AGENCY.

Stock and Manufacture Account of the Sadr Factory, Ghazipur, for 189

PART I.—OPIUM, LEAF AND TRASH.

No. 1.—OPIUM JARS AND POTS RECEIVED AND EXAMINED.

	Balance.		Received.		Total.		Examined.		Balance.	
	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.	Jars.	Pots.
Ghazipur										
Azamgarh										
Gorakhpur										
Basti										
Mirzapur										
Allahabad										
Etawah										
Fatehgarh										
Mainpuri										
Bareilly										
Sitapur										
Lucknow										
Faizabad										
Gonda										
Partabgarh										
Rai Bareilly										
Total ...										

Signature of Officer in Charge.

No. 2.—RECEIPT OF OPIUM.

Details.	Previously received.						Received this day.						Total.					
	M.		s.		c.		M.		s.		c.		M.		s.		c.	
Opium																		
Pasewah																		
Dhoi																		

Signature of officer in charge.

No. 3.—CONFISCATION OF OPIUM.

Details.	Previously confiscated.						Confiscated this day.						Total.					
	M.		s.		c.		M.		s.		c.		M.		s.		c.	
Opium																		
Pasewah																		
Opium from Behar ...																		
Total ...																		

Signature of Officer in Charge.

FACTORY FORM NO. 152.]

BENARES OPIUM AGENCY.

Stock and Manufacture Account of the Sadar Factory, Ghazipur, for 190

PART I.—OPIUM, LEAF AMD TRASH.

No. 1.—OPIUM JARS, BAGS AND POTS RECEIVED AND EXAMINED.

Divisions.	Balance in store.			Received.			Total.			Examined.			Balance.		
	Jars.	Bags.	Pots.	Jars.	Bags.	Pots.	Jars.	Bags.	Pots.	Jars.	Bags.	Pots.	Jars.	Bags.	Pots.
Ghazipur ...															
Azamgarh ...															
Gorakhpur ...															
Basti ...															
Mirzapur ...															
Allahabad ...															
Etáwah ...															
Cawnpore ...															
Fatehgarh ...															
Mainpuri ...															
Bareilly ...															
Budaon ...															
Sitapur ...															
Hardoi ...															
Lucknow ...															
Bara Banki ...															
Fyzabad ...															
Gonda ...															
Partabgarh ...															
Rae Bareli ...															
Total ...															

Signature of Officer in Charge.

No. 2.—RECEIPT OF OPIUM.

Details.	Previously received.			Received this day.			Total.		
	M.	S.	C.	M.	S.	C.	M.	S.	C.
Opium									
(a) Good									
(b) Inferior ...									
Pasewa									
Kaffa									
Dhoi									

Signature of Officer in Charge.

No. 3.—CONFISCATION OF OPIUM.

Details.	Previously received.			Confiscated this day.			Total.		
	M.	S.	C.	M.	S.	C.	M.	S.	C.
Opium									
(a) Good									
(b) Inferior ...									
Pasewa									
Kaffa									
Opium from Bihar ...									
Total ...									

Signature of Officer in Charge.

BENARES OPIUM MANUAL.

PART III.

No. 16.

PAGES 268 to 276, Appendix B, Factory Form No. 139 :—

Substitute the accompanying revised form for the above form :—

No. 4—Malkhana account of opium.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Imports.							Exports.						
Balance.	Gross receipt.	Deductions on account of—				Net opium received in malkhana.	Total of columns 1 and 7.	For provision cakes.	For excise purposes.	For lewa.		*Adhesion in exporting.	Total of columns 9 to 13.	Balance column 8 minus 14.
		Confiscation.	*Adhesion in importing.	Burnt opium transferred for morphia.	Total of columns 3, 4, and 5.									
Sr. M. S. C.	M. C. C.	M. S. C.	M. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.

Signature of Officer in Charge.

* Adhesion in importing ... 5 chitaks per jar and 2½ ditto per bag } found by experiment to be the average loss.
Ditto ditto ... 1 chitak per pot.
Ditto in exporting ... ditto per vessel }

No. 4.—Malkhana account of opium.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Import.							Export.						
Balance.	Gross receipt.	Deductions on account of—				Net opium received in malkhana.	Total, columns 1 and 7.	For provision cakes.	For excise purposes.	For lewah.		Adhesion in exporting.*	Total of columns 9 to 13.	Balance column 8 minus column 14.
		Confiscation.	Adhesion in importing.*	Burnt opium transferred for morphia.	Total, of columns 3, 4, and 5.									
M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M.	M.	M.	M.	M. s. c.	M. s. c.	M. s. c.

Signature of Officer in Charge.

Adhesion in importing ... 5 chittacks per jar } found by experiment to be the average loss
Do. in exporting ... ½ chittack per pot
1 ditto per vessel

No. 5.—Opium received and expended in manufacture of provision cakes.

Receipts.				Expenditure.						Remarks.
Details.	Gross opium.			Details.	Gross opium.			Total.			
	M.	S.	C.		M.	S.	C.	M.	S.	C.	
Opium received from malkhana, as per account No. 4. Lewah received from lewahkhana, as per account No. 7.				Opium expended in making cakes at 1 seer 7½ chittacks per cake Broken pieces of pots, &c. ... ... Loss on account of adhesions &c. ... ... Dryage in alligation and caking vats ... ... Lewah expended in manufacturing cakes ... ... Unexpended balance of lewah returned to lewahkhana ... Note.—Opium expended in caking over 70·50 maunds.							
Total ...				Total ...							

Signature of Officer in Charge.

No. 6.—Manufacture and packing of provision cakes.

Cakes manufactured.					Cakes packed.				Remarks.
Details.	Cakes of standard consistence, *i.e.*, between 69·50° and 70·50°.	Cakes above 70·50°	Total.	Caking consistence of the day.	Details.	Balance.	Number packed.	Balance.	
Previously manufactured ... Manufactured this day ...					Cakes { of standard 70° consistence ... ... above 70·50° consistence				
Total ...					Total ...				

Signature of Officer in Charge.

No. 5.—Opium received and expended in manufacture of provision cakes.

Receipt.				Expenditure.						Remarks.
Details.	Gross opium.			Details.	Gross opium.			Total.			
	M.	S.	C.		M.	S.	C.	M.	S.	C.	
Opium received from Malkhana as per account No. 4.				Opium expended in making cakes							
Lewa received from lewakhana as per account No. 7, after deducting quantity returned as unexpended.				(a) Of and over 71° consistence							
				(b) Of under 71° consistence							
				Broken pieces of pots, &c.							
				Loss on account of adhesion, &c.							
				Dryage in alligation and caking vats							
				Lewa expended in manufacturing cakes... ...							
Total ...				Total ...							

Signature of Officer in Charge.

No 6.—Manufacture and packing of provision cakes.

Cakes manufactured.					Cakes packed.				Remarks.
Details.	Cakes of standard consistence, *i.e.*, between 70·50 and 71·50.	Cakes above 71·50.	Total.	Caking consistence of the day.	Details.	Balance.	Number packed.	Balance.	
Previously manufactured ...					Cakes { Of standard 71 consistence.				
Manufactured this day ...					Above 71·50 consistence				
Total ...					Total ...				

Signature of Officer in Charge.

No. 7.—Manufacture and expenditure of Lewa.

Opium, &c., received and manufactured into Lewa.													Expenditure.													Remarks.
Details.	Gross.				At 70°.				At 52·50°.				Details.	Gross.				At 70°.				At 52·50°.				
	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.		M	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	
Balance													Issued for manufacture of cakes													
Received from malkhana ...													,, for satai and repair of cakes.													
Contraband opium													,, for petty repairs of cakes													
Pasewa													Total ..													
Kaffa													Balance ...													
Dhoi (thick)													Total ...													
Do. (thin)																										
Returned Lewa																										
Opium of damaged cakes																										
Total ...																										

Signature of Officer in Charge.

No. 8.—Receipt and expenditure of pasewa and dhoi.

Receipt.													Expenditure.													Remarks.
Details.	Gross.				Pasewa 52·5.				Dhoi 52·5.				Details.	Gross.				Pasewa 52·5.				Dhoi 52·5.				
	M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.		M.	S.	C.	K.	M.	S.	C.	K.	M.	S.	C.	K.	
Balance													*Issued for manufacture of Lewa.*													
Pasewa received ...													Pasewa													
Dhoi (thick) ...													Dhoi (thick) ...													
Do. (thin) ...													Do. (thin) ...													
Kaffa													Kaffa													
													Total ...													
													Balance ...													
Total ...													Total ...													

Signature of Officer in Charge.

No. 7.—Manufacture and expenditure of lewah.

Opium, &c., received and manufactured into lewah.				Expenditure of lewah.				Remarks.
Details.	Gross.	70°.	52·5°.	Details.	Gross.	70°.	52·5°.	
Balance				Issued for manufacture of cakes				
Received from malkhana ...				,, for satai and repairs of ditto.				
Contraband opium				,, for petty repairs of ditto				
Pasewah								
Dhoi (thick)				Total ...				
Do. (thin)				Balance ...				
Total ...				Total ...				

Signature of Officer in Charge.

No. 8.—Receipt and expenditure of pasewah and dhoi.

Receipts.				Expenditure.				Remarks.
Details.	Gross.	Pasewah, 52·5°.	Dhoi, 52·5°.	Details.	Gross.	Pasewah, 52·5°.	Dhoi, 52·5°.	
Balance				*Issued for manufacture of lewah.*				
Pasewah received				Pasewah				
Dhoi (thick)				Dhoi (thick)				
Do. (thin)				Do. (thin)				
				Total ...				
				Balance ...				
Total ...				Total ...				

Signature of Officer in Charge.

No. 9.—Abkari opium.

Unmanufactured opium.							Manufactured opium.			
Details.	Gross.			At 90° consistence.			Details.	Chests.		At 90°.
								Chests.	Cakes.	
	M.	s.	c.	M.	s.	c.				M. s.
Receipt ... Balance in stock							Balance in stock			
Receipt ... From malkhana							Received into store from Unmanufactured account			
Receipt ... Contraband opium										
Total ...							Total ...			
Expenditure ... Manufactured, packed, and stored ...										
Expenditure ... For potsherds										
Expenditure ... ,, scrapings and dhoi										
Expenditure ... ,, adhesion and turn of scale ...							Issued as per stock register			
Total ...										
Balance in stock ...							Balance in stock ...			

Signature of Officer in Charge.

No. 10.—Contraband opium.

Balance.	Received.	Total.	Issued for—				Balance.
			Abkari.	Lewah.	Morphia.	Total.	

Signature of Officer in Charge.

No. 9.—Abkari opium.

Unmanufactured opium.								Manufactured opium.			
Details.	Gross.			At 90°. consistence.				Details.	Chests.		At 90°. Consistence.	
									Chests.	Cakes.		
	M.	S.	C.	M.	S.	C.					M.	S.
Receipt ... Balance in stock								Balance in stock				
Receipt ... From malkhana								Received into store from manufactured account				
Receipt ... Contraband opium												
Total ...												
Expenditure ... Manufactured, packed and stored ...								Total ...				
Expenditure ... For potsherds												
Expenditure ... ,, scrapings and dhoi								Issued as per Stock Register				
Expenditure ... ,, adhesion and turn of scale ...												
Total ...												
Balance in stock ...								Balance in stock ...				

Signature of Officer in Charge.

No. 10.—Contraband opium.

Balance.			Received.			Total.			Issued for—													Balance.		
									Abkari.			Lewa.			Alkaloids.			Total.						
M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.

Signature of Officer in Charge.

No. 11.—Opium, &c., received for manufacture of alkaloids.

Details.	Confiscated opium, Benares.			Confiscated opium, Bihar.			Burnt opium.			District dhoi.			Contraband opium.			Pasewa.			Kaffa.		
	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.
Opening balance																					
Received																					
Total ...																					
Issued for manufacture																					
Destroyed																					
Total ...																					
Balance in stock ...																					

Signature of Officer in Charge.

No. 12.—Opium alkaloids.

Details.	Morphine, pure.			Morphine hydrochlorate.			Morphine, acetate.			Morphine, sulphate.			Morphine, tartras.			Codena.			Narcotin.		
	lb.	oz.	dr.	lb.	oz.	dr.	lb.	oz.	dr.	lb.	oz.	dr.	lb.	oz.	dr.	lb.	oz.	dr.	lb.	oz.	dr.
Balance in stock																					
Manufactured this day																					
Total ...																					
Issued or sold																					
Balance ...																					

Signature of Officer in Charge.

No. 11.—Opium, &c., received for manufacture of alkaloids.

Details.	Confiscated opium, Benares.			Confiscated opium, Behar.			Burnt opium.			District dhoi.			Contraband opium.		
	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.	M.	s.	c.
Opening balance															
Received															
Total ...															
Issued for manufacture															
Destroyed															
Total ...															
Balance in stock ...															

Signature of Officer in charge.

No. 12.—Opium alkaloids.

Details.	Morphia hydrochlorate.		Morphia acetate.		Codeia.	
	lb.	oz.	lb.	oz.	lb.	oz.
Balance in stock						
Manufactured this day						
Total ...						
Issued or sold						
Balance ...						

Signature of Officer in Charge.

No. 13.—Opium held in deposit in the laboratory.

Details.	Powdered opium.			Cake opium.					
Opening balance									
Received									
Total ...									
Issued to Abkari Department									
Issued or lewah									
Total ...									
Balance in stock ...									

Signature of Officer in Charge.

No. 14.—Leaf.

Details.	Quantity.			Total.		
Balance in stock						
Receipt as per stock register						
Total ...						
	M.	S.	C.			
For making shells of cakes						
„ satai and repairs of do.						
Petty repairs of cakes						
Sold by auction as per order No. of						
Deduct total expenditure, including wastage						
Balance in stock ...						

Signature of Officer in Charge.

No. 13.—Opium held in deposit in the laboratory.

Details.	Powdered opium.			Cake opium.					
	M.	S.	C.	M.	S.	C.			
Opening balance									
Received									
Total									
Issued to malkhana									
Do. to Abkari Department									
Do. to Lewa ,,									
Total									
Balance in stock									

Signature of Officer in Charge.

No. 14.—Leaf.

Details.	Quantity.			Total.		
	M.	S.	C.	M.	S.	C.
Balance in stock						
Receipt as per Stock Register						
Total						
For making shells of cakes						
,, satai and repairs of do.						
,, petty repairs of do.						
Sold by auction as per order No. of						
Wastage						
Deduct total expenditure						
Balance in stock						

Signature of Officer in Charge.

No. 15.—Trash .

Details.	Uncleaned.			Cleaned.		
	M.	S.	C.	M.	S.	C.
Balance in stock						
Received this day						
Total						
Issued for cleaning ... { Cleaned during the day						
{ Loss at 36 per cent. in cleaning						
Issued for ... ... { Caking						
{ Satai and repairs						
{ Rubbing cakes						
{ Bedding for cakes						
{ Packing						
Damaged by wet, mildewed, &c.						
Deduct total expenditure						
Balance in stock						

Signature of Officer in Charge.

Part II.—Stores.

No. 1—Packing Materials.

Details.	Provision chests.	Provision lids.	Divisions.	Abkari chests.	Abkari lids.	Abkari division.	Bamboo mats.	Gunny sets.	Nails 3″.			Nails 2½″.			Nails 2″.			Coal pitch.			Common oil.			Poppy oil.			Ghazi cloth.			Twine, 4 ply.			Twine, 3 ply.			Nepal paper.		
									M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.	M.	S.	C.
Balance in store ...																																					
Received in store ...																																					
Total ...																																					
Issued for packing ...																																					
Balance in store ...																																					

Signature of Officer in Charge.

No. 15.—Trash.

Details.		Uncleaned.		Cleaned.		
		M.	s.	M.	s.	
Balance in stock						
Received this day						
	Total ...					
	M. s.					
Issued for cleaning	Cleaned during the day					
	Loss at 36 per cent. in cleaning					
Issued for	Caking					
	Satai and repairs					
	Rubbing cakes					
	Packing					
	Damaged by wet, mildewed, &c....					
	Balance in stock ...					

Signature of Officer in Charge.

Part II.—STORES.

No. 1.—Packing materials.

Details.	Provision chests.	Provision lids.	Divisions.	Coal pitch.	Gazi cloth.	Gunny sets.	Nails, 3″.	Mats.					
Balance in store													
Received into store													
Total ...													
or packing													
Balance in store ...													

Signature of Store-keeper.

No. 2.—Cups.

Details.		Number of cup.	
Balance in store			
Received			
	Total ...		
	No.		
Issued ... ... { For caking room			
„ cake godown			
Broken cups thrown away			
	Balance in store ...		

Signature of Officer in Charge.

Part III.—Meteorological Register.

Barometer.		Thermometer, dry bulb.		Humidity.		Directions of wind.		Rain fall.		Remarks.
10 A.M.	4 P.M.	10 A.M.	4 P.M.	10 A.M.	4 P.M.	10 A.M.	4 P.M.	10 A.M.	4 P.M.	

Benares Opium Agency,
Sadr Factory.
189

All accounts have been examined by me and found correct.

Head Auditor.

Factory Superintendent.

No. 2.—Cups.

Details.	Number of cups.	
Balance in store		
Received		
Total ...		
Issued — For caking room		
Issued — ,, cake godown		
Issued — Broken cups thrown away		
Deduct total expenditure		
Balance in store ...		

Signature of Officer in Charge.

Part III.—Meteorological Register.

Barometer.		Thermometer, dry bulb.		Humidity.		Direction of wind.		Rainfall.		Remarks.
10 A.M.	4 P.M.	10 A.M.	4 P.M.	10 A.M.	4 P.M.	10 A.M.	4 P.M.	10 A.M.	4 P.M.	

Assistant Opium Examiner.

Benares Opium Agency,
Ghazipur:
The 190

Certified that all accounts have been examined by me and found correct.

Factory Accountant.

Factory Superintendent.

19-11-1902.

FACTORY FORM No. 140.]

BENARES OPIUM AGENCY.

Periodical Report showing the extent of the Import Manufacturing Operations at the Benares Opium Factory, for the week, ending the , compared with those of the week of

	Number of opium jars received into store at the Sadr Factory from the district officers.		Number of jars weighed by the assistants.		Number of jars examined by the Opium Examiner.		Number of cakes manufactured.		Average consistence of the week's manufacture.		REMARKS.
	189 -9 .	189 -9 .	189 -9 .	189 -9 .	189 -9 .	189 -9 .	189 -9 .	189 -9 .	189 -9 .	189 -9 .	
Up to las week											
Present week											
Total ...											

BENARES OPIUM AGENCY,
The 189 .

Opium Agent.

FACTORY FORM No. 141.]

BENARES OPIUM AGENCY.

Account of Opium held in the Laboratory for analysis, &c.

MONTH AND DATE.	POWDERED OPIUM OUT OF MALKHANA STOCK, *i.e.*, ASSAY SPECIMENS.					CAKE OPIUM.					Signature of Assistant Opium Examiner.	REMARKS.
	Opening balance.	Receipts.	Total.	Issued to Abkari Department and deducted from malkhana account.	Balance.	Opening balance.	Receipts.	Total.	Issued for lewah.	Balance.		

APPENDIX C.

A.

DISTRICT
No. , dated
To
OPIUM EXAMINER,
GHÁZIPUR.

Forwards suspected opium declared by the Civil Surgeon to be fit for use.
Weight of parcel
Weight of contents
No. of seals

Signature.

To be used by the Magistrate for record.

B.

DISTRICT
No. , dated
To
OPIUM EXAMINER,
GHÁZIPUR.

Forwards in separate parcel confiscated opium declared by the Civil Surgeon to be fit for use.
Weight of parcel
Weight of contents

Seal

No. of seals on parcel.

Signature.

To be sent in separate cover by post to the Opium Examiner, Gházipur.

C.

ON HER MAJESTY'S SERVICE.
DISTRICT
No. , dated
By parcel post, registered.
To
OPIUM EXAMINER,
GHÁZIPUR.

Collector.

To be affixed to the parcel, which should be post-paid registered, and franked "On Her Majesty's Service."

APPENDIX D.

ADULTERATIONS OF OPIUM AND THEIR DETECTION.

BEFORE dealing with the impurities of opium and the tests employed for detecting them, it will be necessary here to describe concisely the characteristics of pure opium and pasewa.

Pure opium.

Opium is a plastic, viscid, more or less solid mass of a brownish colour, varying in shade from fawn to dark mahogany. It adheres to the fingers, and draws out to a moderate extent, breaking with a short ragged fracture. When rubbed into a thin film between two slips of glass or on a white plate, the colour is a chestnut brown of more or less intensity. Its texture appears granular unless it has been over manipulated or contains in its composition an excess of pasewa. When rubbed down on an even surface it presents a perfectly smooth and homogeneous appearance. The aroma of opium is peculiar and characteristic. In well prepared fresh drug the aroma is decidedly fruity, but it varies with age, and even with the soil and climate in which it is grown.

Its taste is bitter. When manipulated under water, the drug adheres moderately to the fingers at first, curdy flakes soon subside, leaving the supernatant liquor of a brownish yellow colour varying in shade in proportion to the amount of opium in a given quantity of water.

Tests for opium.

If to a portion of this clear fluid a few drops of a solution of diacetate of lead be added, a dirty grey precipitate nearly equal in bulk to the amount of fluid is produced consisting of resin, colouring matter and meconate of lead.

Ammonia throws down a similar and almost equally abundant precipitate, composed of resin and the alkaloids, which on exposure to the air speedily assumes a black colour. If a few drops of strong sulphuric acid are added, the whole will immediately redissolve; if the precipitate be filtered off, and dissolved in a small portion of dilute sulphuric acid the solution becomes a beautiful transparent ruby red colour.

Tincture of iodine causes a brick red precipitate which redissolves after a time; this is formed of compounds of iodine with narcotine and codeia. Ferric chloride strikes a deep cherry red colour forming a soluble meconate of iron.

Pure opium under the microscope.

A small portion thinly spread on a glass slip and examined by transmitted light with a magnifying power of 200 diameters should present a homogeneous appearance interrupted only by the presence of prismatic crystals.

Abnormal appearance of pure opium.

A frequently recurring case, wherein good opium presents an abnormal appearance, is that of opium through which light coloured roundish particles resembling fig seeds are scattered. If a small portion of this seed-like matter be picked out, pressed between two slips of glass and examined by transmitted light, it will appear as a flattened creamy opalescent mass surrounded by any opium which may have been taken up with it; if it be now placed under a magnifying power of 200 diameters, the creamy mass will be seen to be made up of a multitude of needle-like crystals. These seed-like bodies have all the appearance of an adulteration, but if they present the above physical characteristics and strike a deep cherry red colour with chloride of iron, the opium may, so far as they are concerned, be taken as pure.

Pasewa.

Pasewa is a black looking shining viscid liquid, resembling tar, of strong opiate smell and acrid taste. It is formed under peculiar atmospheric conditions and is collected in combination with opium, from which it can be separated by carefully manipulating and draining the drug; in fact the slight fermentative process which opium undergoes after collection, of itself assists in this separation by the pasewa being forced into thin streams and pools about the vessels in which it is stored. All that is needed is to direct and attract these streams of pasewa away from the opium. It happens either from ignorance of the mode of treating the raw drug or from carelessness or design, that the pasewa is frequently left with the opium,

and in the process of preparing the drug for weighments, the opium and the pasewa are intimately mixed together. Opium so treated loses in value from a departmental standard, that containing much pasewa is generally dirty (from the adhesive qualities of the pasewa, dust and impurities adhere to its surface, and get mixed up in it), and the pasewa serves besides as a very convenient cover for adulterations.

Deteriorated and adulterated opium.

Opium that falls short of the standard of purity required by the Department may be conveniently classified as deteriorated opium and adulterated opium.

Deteriorated opium requires experience, but no chemical tests for its detection.

It is of four kinds:—

(*i*) Opium with an abnormal admixture of pasewa.
(*ii*) Opium mixed with water.
(*iii*) Opium deprived of some of its valuable constituents by washing.
(*iv*) Opium mixed with the washings of vessels used for its storage.

Deterioration by admixture with pasewa.

Opium with an abnormal admixture of pasewa is known as "pasewa amez." As a matter of fact a large percentage of the opium of both Agencies, and particularly of the Benares Agency, contains a certain small proportion of pasewa, which it has not been found possible to separate. And as it is not possible by any mechanical means to gauge the percentage of pasewa present in any given sample of the drug, no hard-and-fast rule can be laid down for the classifying of "pasewa amez," which is left therefore to the experience and discrimination of the classifying officer. As a rule, opium which has its grain intact, and retains its characteristic colour ranging from a chestnut to a dark mahogany (other conditions of purity being favourable), may safely be accepted as good, even though it show streaks or small pools of pasewa on the edges or in the centre of the mass; on the other hand, when by intimate mixing the granular texture of the drug has been destroyed, its dull wax-like appearance changed to one more or less smooth and shining, where it has become glutinous, and its colour appears more or less black, then there exist all the appearances of a large percentage of pasewa, and the drug is considered to have deteriorated from the departmental standard.

Deterioration by admixture with water.

Opium is sometimes found with an admixture of water. This may be intentional with a view to increase weight, or it may be due to accident or ignorance at the time of collection under heavy dew or rain. The effect of adding water to opium frequently, or to any great extent, is the destruction of its natural colour and grain giving it a pasty glutinous appearance, and after some time a peculiar dark colour and acescent flavour; when large quantities in this state are kept shut up in close vessels, fermentation generally ensues and the drug undergoes material change for the worse, seldom yielding the full proportion of narcotic principle which it should possess.

Deterioration by washing.

Opium is sometimes to a small extent accidentally deteriorated by washing when rain falls during the collection of the drug. More often, however, it is washed with the intention of obtaining a partial solution of the valuable alkaloids and other soluble matters, which by subsequent drying forms a valuable extract possessing powerful narcotic properties, while the residue is inspissated to the usual degree of consistence and delivered as genuine. Such opium will be found to consist mostly of resin and caoutchouc; it will not easily rub down on a plate, and in bad cases will not rub down at all; it will resemble soft india-rubber when pulled out, the natural colour of the opium will be partly destroyed, and the aroma will be foreign and acescent. When opium is suspected of having been tampered with in this manner, a small portion may be carefully squeezed in cold water between the fingers, when it will be seen to impart a very trifling colour to the water, and the marc will be seen to consist of a tough insoluble mass made up mostly of caoutchouc and resin.

This is a common cause of deterioration, and is due largely to ignorance. In order to avoid losing even the smallest part of his produce, an ignorant cultivator will wash the plates that he has used for preparing the drug before delivery to Government. These washings, which contain a large percentage of dust and the scrapings of the earthenware pot, are evaporated, and then intimately mixed with the opium. Such a deterioration is easily detected as the washings will not amalgamate with the drug, and can be seen in small dark lumps or grains scattered about the parcel. These have only to be picked out and examined between two glass slips or rubbed on a white plate to disclose their true character.

Deterioration by incorporation of evaporated washings.

Adulterated, as distinguished from deteriorated, opium, is opium with which has been amalgamated a foreign substance. Such opium is generally distinguishable by its departure from some of the known characteristics of pure opium with regard to fracture, grain, ductility, smell or taste. In most cases an impurity is apparent by its own peculiar characteristics, but often it is necessary to ascertain the exact nature of the adulterant by chemical tests.

Adulterated opium.

Before proceeding further, it is necessary to explain that the examination of impure opium for departmental purposes must be conducted by a series of tests calculated to reveal directly the presence of specific foreign substances, and not by a chemical analysis. A chemical analysis is an expensive process, requiring great care and nicety for its correct performance and demands some days for its completion; moreover chemical analysis reveals adulterations indirectly, as a specimen which on chemical analysis appears to be adulterated only to an inconsiderable extent, may yet contain substances of such a nature as to render it wholly unfit for departmental use.

Adulterations ascertained by chemical tests and not by analysis.

The substances usually employed for adulterating opium are:—

The common adulterations of opium.

(*a*) Those of a soluble nature which are found to be in such intimate admixture that they can, as a rule, only be chemically separated. Under this head there are:—

(*i*) Vegetable matter containing gum and mucilage.
(*ii*) Vegetable astringent extracts such as catechu, &c.
(*iii*) The juice of the several "milk" yielding trees.
(*iv*) Saccharine matter such as treacle, raw sugar, &c.
(*v*) Other foreign vegetable extracts.

(*b*) Those of an insoluble character which are for the most part separable by physical analysis, though a chemical test is mainly relied on in the case of the first-named. Under this division come:—

(*i*) Farinaceous substances such as flour, soojee, suttoo and the like; as well as the ground up pulp of the potato, yam, &c.
(*ii*) Poppy seeds and petals and other green vegetable substances and pounded tobacco leaf.
(*iii*) Vegetable oils and ghee.
(*iv*) Charcoal, soot, earthy matter, brick dust, sajji-matti, and other such insoluble substances.

The following method is the one employed for examining a sample of opium suspected to be impure. About an ounce* of the suspected drug should be taken and placed in a copper saucepan and to this about three fluid ounces (by measure) of distilled, condensed or rain water should be added; the saucepan should then be placed on a charcoal fire, and the contents stirred constantly with a glass rod until the whole of the drug has been thoroughly broken up, and until the mixture boils. After ebullition has continued for three or four minutes, the

Method of examining opium.

* Half this quantity would be found sufficient in the districts where an elaborate examination not generally considered necessary.

saucepan should be removed, and the contents at once slowly poured into a filter paper, placed in a funnel leading into a glass beaker.

Attention should now be directed to—

(*a*) any residue that may be left in the saucepan;
(*b*) the rate of filtration of the decoction;
(*c*) the colour of the filtrate;
(*d*) the chemical reaction of the filtrate;
(*e*) the residue left on the filter paper.

Information derivable from residue in saucepan.

If the specimen contains any insoluble impurities of greater specific gravity than opium, such as sand, heavy mud, chips of pots, &c., these will be left as a residue in the saucepan. When very fine and light mud has been employed, a portion of it only may remain behind, and the remainder will run off along with the rest of the contents of the saucepan.

Information derivable from the rate of filtration.

The rapidity with which the fluid portion runs through the filter will afford characters by which we can recognize certain adulterations. If the opium be good and well prepared, and the filter be of ordinary thickness, the fluid will run through rapidly and completely; if it contain much pasewa, it will not filter so rapidly, especially the last portion of fluid. If the opium contain much gum, filtration will likewise be slow, and if it contain farinaceous matter, it will be still slower; in fact, if it contain flour, soojee or ground gram (all frequent articles of adulteration) in any considerable quantity, not a drop of fluid will pass through the filter, and the whole will form a tremulous paste on the filter, from which no fluid will separate. The admixture of about one-seventh of its weight of flour with opium will render filtration impossible.

Information derivable from the colour of the filtrate.

When good opium is treated in the manner described above, the filtrate should be of the deepest mahogany brown colour; in fact, precisely similar to an ordinary infusion of coffee. If the drug contain much pasewa, this will impart a deeper shade to the solution; and if, on the other hand, the opium be the produce of high land which has been recently brought under poppy cultivation, the solution will be several shades lighter, corresponding with the lighter colour of such drug. Deviation from the above colour will denote adulterations. A filtrate of a brick red colour may lead to the detection of a substance containing tannin by the help of the proper test, or again a rose coloured filtrate may be due to the presence of some vegetable colouring matter the precise nature of which it will be difficult to ascertain by chemical tests.

Information derivable from the chemical reaction of the filtrate.

The examination of the filtrate should next be proceeded with by the various tests.

Starch.

The starch test should be first applied in the following manner:—

Pour a few drops of the filtrate on a white earthen-ware plate, and spread it out with the finger or a glass rod into a thin film, then take up with a pipette some of the iodine* solution from the expense bottle, and allow 2 or 3 drops to

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* The iodine test solution used is that known in the Department as "Sheppard's solution." It is prepared by dissolving 5 grains of potassic iodide in about 4 fluid ounces of distilled water and then adding to it about one grain of the iodine. This solution will have the colour of pale sherry and will possess the advantage over an ordinary solution of iodine and water in not readily parting with its iodine when the weather becomes warm. When, however, the bottle containing the solution is subjected to extreme heat by being taken into the sun, as it frequently happens in district parakhing, the iodine, even in this solution, will volatilize and the solution become gradually colourless. To guard against this, district officers should always keep a stock bottle and an expense bottle, the latter being replenished every second or third day from the stock bottle.

It should be pointed out here that it is not the potassic iodide but the iodine in the solution which gives the characteristic reaction with starch, the potassic iodide being present merely to give stability to the iodine in the solution. If, however, the solution has by careless exposure to the sun parted with its iodine and become colourless and a fresh supply is not obtainable, it can still be used, provided always dilute nitric acid be used with it, as explained in the text, so as to break up chemically the iodide of potassium in the solution and thus to set free the iodine contained in it.

fall from the pipette on the filtrate spread out on the plate. The proper reaction from good opium will be an orange coloured precipitate.

If the reagent produces a blue or a green colour, it indicates that some substance containing starch is present; when the colour is green it indicates a feeble adulteration; when it is blue a stronger one. If the test gives a faint purple or greenish tinge round the edge, where the iodine solution has dropped, or if the reaction, though not green or blue, is somewhat suspicious in appearance, and it is necessary that the presence or absence of starch should be placed beyond a doubt, then drop with another pipette 2 or 3 drops of dilute nitric acid on the solution on the plate. The nitric acid will have the effect of breaking up the iodide of potassum contained in the reagent used, and if there is any starch in the filtrate under examination, the liberated iodine will at once combine with it, forming an iodate of starch, and placing its presence beyond a doubt by the blue or green colour produced. This is a very delicate test and will reveal the presence of small quantities of starch where free iodine alone in solution has failed to reveal it.

This test embraces a very wide range of adulterating substances, namely, all articles containing starch and including flour, soojee, sago, arrowroot, rice, potatoes, yam, gram and a great variety of seeds and roots. If the specimen chance to be very largely adulterated with starchy matter, and no fluid will pass through the filter, the test described above should be applied to a small portion of the pasty matter in the filter taken out with the end of a glass rod.

It may happen in rare instances that with every indication of the presence of starchy matter, by the refusal of the decoction to filter and the proved absence of gum, the iodine test will not give the characteristic reaction. In such cases it must be presumed that the starch has been subjected to the long continued action of heat and has been altered to dextrine and sugar, in which condition the iodine test would fail. In such cases the microscope should be used, and it will be found to reveal the existence of starch cells in the specimen under examination.

Gum.

If gum be suspected in a parcel of opium, take a test tube and fill it half full of rectified spirits of wine, then drop into it a few drops of the filtrate under examination. If gum be present there will be a more or less copious white flakey or lumpy precipitate which will gradually subside into a white mass at the bottom of the tube. This test requires to be used with considerable precaution, and to avoid arriving at false conclusions the docoction should not be boiled longer than has been recommended above, as opium contains naturally a portion of gum which can only be separated by spirits of wine by boiling down the decoction to a small bulk. In certain cases, however, moderate precipitates of gum are occasioned when adulteration certainly does not exist, owing to the proportions of the several constituents of opium in different samples varying according to peculiarities of soil, season, &c. This slight reaction is also common when a large quantity of pasewa is present in the drug though it has also been noticed in the light coloured variety. Should such slight precipitate appear, it is not to be assumed at once that gummy or mucilaginous adulteration is present. Gum cannot be incorporated with opium without prolonged trituration, in which case the grain and texture of the drug are entirely lost, and the opium draws out like stiff mucilage. If therefore the texture be unbroken and the other physical characteristics of the drug be good, a slight precipitate on the addition of the filtrate to alcohol may be disregarded.

This test will reveal the presence of a large number of adulterants such as:—

Gum arabic from the mimosa arabica.

Gum resin or "lassa" from the Ficus indica, Ficus religiosa, Ficus racemosa and the Ficus venosa; the pulp of the bael fruit (Aegle marmelos), tamarind pulp (Tamarindus indica); and various other substances such as linseed, babool gum, the juice of the prickly pear, &c.

If the sample of opium under examination is suspected of being adulterated with any substances containing tannic acid, the test usually applied is a solution of isinglass. Fill a glass test tube half full of the solution, freshly prepared, and allow a few drops of the filtered decoction of opium to fall into it. If tannic acid is present a pinkish grey precipitate will make its appearance. This test can be confirmed by treating a few drops of the opium filtrate with a solution of the sulphate of iron on a white plate. The action of the sulphate on the tannic acid will cause a black colour which will be persistent. If the filtrate from good opium be treated with the same solution of iron, only a temporary blackness will be produced, passing through shades of brown to red, caused by the formation of meconate of iron. The substances that would be revealed by this test are catechu (Acacia catechu); gab fruit (Embryopteris glutinifera); the betel-nut (Areca catechu); and the various extracts from gal nuts, the pomegranate, &c.

Adulterants containing Tannin.

These may be mixed with opium in considerable quantities without materially altering its appearance; in fact, with the effect of improving its colour when this is dark from admixture of pasewa. The practised examiner, however, will soon detect the presence of these substances by their smell and their peculiar adhesiveness to the fingers. When they are suspected, a safe test to be applied is the copper test (Fehling's solution* is the form used at the factory).

Raw cane sugar and treacle.

To use it in testing for cane sugar and its derivatives in opium, add to a small quantity, say two teaspoonsful of the filtered decoction of opium in a test tube, 2 or 3 drops of dilute sulphuric acid, and boil for a few minutes; then add excess of potassic hydrate and then the copper solution. If sugar be present there will be a yellow, orange or red precipitate of cuprous oxide.

A simple method of ascertaining the presence of saccharine adulteration is to dry a portion of the suspected opium upon a plate placed upon a little sand over the top of an iron stove. As the desiccation of the specimen proceeds the smell emitted by heated sugar will be observable, and the residue instead of presenting the usual appearance of a yellowish brown powder will remain dark and sticky, and at last will fry into hard bake.

Having completed the above tests of the filtrate under examination, attention should next be turned to the marc upon the filter which will contain any impurities not soluble in water which may chance to be in the drug; and for the purposes of examination the contents of the filter should be emptied out on a white plate. In pure and well-prepared opium the marc, which is made up of the caoutchouc and resinous constituents of the drug, forms a bulky soft marc of granular texture; when much pasewa is present, the marc will be diminished in bulk, and it will also lose to a certain extent its loose granular character, and will become more compact and viscid. The colour of fresh marc under ordinary circumstances is a dull yellow. In the case of opium from new and high land, the colour is a bright gamboge yellow, and in drug of an opposite character, and containing much pasewa the colour is a dark brownish yellow inclining to brown.

Information derivable from the marc.

In cases of deterioration or adulteration, the colour of the marc may vary from the above through all the different shades of brown to black. If the specimen contain much farinaceous matter, the granular character of the marc will be lost; its bulk will be much increased, and it will form a homogeneous mass of precisely the same character and texture as paste made from flour. This character of the marc joined to imperfect or totally suspended filtration, and the blue reaction with the iodine solution will form an accumulation of evidence rendering the detection of farinaceous adulteration easy and certain above almost every other.

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* Dissolve 34·64 grams pure crystallized cupric sulphate, dried between filter papers, in about 200 c. c. distilled water. Dissolve 173 grams crystallized sodic potassic tartrate in 480 c. c. of solution of sodic hydrate of sp. gr. 1·14.

Add the former solution to the latter and make up to 1,000 c. c. The solution must be kept in a well-stoppered bottle and in the dark.

The next step is to add cold water gradually to the marc, and to break it up completely by means of a spatula, examining it carefully at the same time either by the naked eye, or still better by the aid of a common pocket lens.

Normal character of marc and water.

In pure and well-prepared opium, the marc should diffuse completely and equally through the fluid in the form of light curdy flakes; and when the mixture is decanted quickly, after being briskly stirred, the whole should run off without leaving any sediment in the plate. If the drug contain much pasewa, this flakey or curdy appearance of the marc will be diminished, and the flakes will be small and dark-coloured. When water is first added to the marc under these circumstances, it may have the appearance of containing mud, but as the mixture is stirred, the whole marc will become equally diffused and suspended in the fluid in small curdy flakes, and on decanting the mixture briskly, no sediment will remain.

If any powdery sediment be observed in the above manipulation, it would probably denote adulteration. Sometimes the marc appears extremely bulky, and is filled with air bubbles, causing it to float in masses on the surface of the water, This results from fermentation either caused by the crude juice having been confined in close vessels without inspissation or by water having been mixed with it.

Abnormal character of marc and water.

By the careful examination of this mixture of marc and water, a very large class of adulterating substances will be revealed. When poppy petals or tobacco leaves have been pounded up with the drug, portions which have escaped destruction will be found floating in the liquid; fragments of poppy capsules, of stems of leaves, and of flowers of plants, seeds of various descriptions, fragments of charcoal, soot, mud earth, brick dust, and all other insoluble impurities will be readily revealed, the lighter ones being observed floating in the water, as it is poured off along with the diffused marc, the more ponderous ones remaining in the plate as a sediment after decantation. If the specimen under examination contain oil of any description or ghee, these substances will be observed floating on the surface of the liquid in which the marc has been diffused, with small particles of this latter entangled with them.

Impurities revealed by a mixture of marc and water.

There are certain adulterations which, from their peculiarly pungent and penetrating smell, reveal their presence on the most cursory examination. The peculiarly offensive odour of opium adulterated with impure carbonate of soda (sajji matte) is unmistakeable. Tobacco, which is not an unfrequent article of adulteration, can generally be detected by its powerful smell alone. The smell of ghee and of most of the Indian oils is so powerful, that it is usually sufficient of itself to reveal the presence of those substances. Confirmatory evidence, however, in such cases should be obtained by drying a small portion of the specimen on a plate in the manner followed in assaying opium. If either ghee or oil be present, the residue instead of appearing as a dry powder of a yellowish brown colour, will be oily or greasy and more or less black, and it will not be possible to dry it to the state of powder.

Impurities distinguished by their own special characteristics.

There is an extensive class of adulterants composed of extracts and the inspissated juice of various plants such as the prickly pear (Opuntia vulgaris); the datura (Datura ferox); the hemp (Cannabis indica); the madow (Calatropis gigantea); the tobacco (Nicotiana tabacum), which will not be detected by the ordinary chemical tests. Most of these substances, when they do not reveal themselves by their odour, so effectually destroy the characteristic appearance of opium when thoroughly incorporated with it that to an experienced examiner their presence will be self-evident. In dealing therefore with opium delivered by cultivators the most careful scrutiny of the texture, colour and aroma of the parcel under examination is imperatively called for, as a safeguard against fraudulent deliveries of adulterated drug.

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